

Exhibit 1

(Part 5)

1918. In an abundance of caution, however, the Tribunal will analyse Reficar's particular claims for CB&I's alleged mismanagement and reckless indifference to cost and schedule with regard to four Vendors, for whose underperformance Reficar presents monetary claims:

a. Steel fabrication (ASER)

1919. As regards steel fabrication, even though Reficar's claim concerns multiple steel fabricators, its arguments focus on ASER in particular.

1920. Reficar argues that CB&I should be responsible for the increase in steel quantities caused by improper estimations and late delivery of engineering drawings¹⁹²³.

1921. CB&I argues that the increases in steel quantities were a natural implication of the design changes made in the Project, mostly during the initial stages¹⁹²⁴.

1922. The Tribunal is convinced by CB&I's argument.

1923. CB&I has plausibly argued that in the initial stages of the Project, Reficar introduced design changes, which resulted in revisions to engineering drawings and to late delivery of engineering deliverables. The total EPC costs grew by some USD 750 million from signing of the EPC Contract (USD 3,221 million) to issuance of the Representation Forecast (USD 3,971 million), due to Synergy Changes and other scope changes ordered by Reficar; Reficar tacitly accepted this increase when it decided to continue with CB&I as the Contractor after receiving the Representation Letter.

1924. Given the number of changes ordered by Reficar at the initial stages of the Project, it is dubious that even a diligent contractor would have been able to produce all the engineering deliverables on time.

1925. To succeed in its claim, Reficar would also need to prove that CB&I failed to undertake steps, which were in CB&I's power, that a diligent and reasonable contractor would have undertaken. Reficar has not pointed the Tribunal to any such particular steps.

Mitigation actions by CB&I

1926. The finding of the Tribunal that CB&I is not responsible is reinforced by CB&I's actions vis-à-vis ASER, the main underperforming Vendor.

1927. When CB&I discovered the unsatisfactory performance of ASER, it took several mitigating steps:

- CB&I assigned its own employees to ASER's Colombia shop¹⁹²⁵;

¹⁹²³ CPHB, para. 272; Reply, paras. 446, 465; ESOC, paras. 286-288.

¹⁹²⁴ RPHB, paras. 190-192, 306; ESOD, paras. 465-466.

¹⁹²⁵ Ex. R-0832, p. 1.

- CB&I self-performed certain of the fabrication drawings that ASER was supposed to prepare¹⁹²⁶;
- CB&I eventually assigned five inspectors to ASER's shops and hired an additional country supervisor¹⁹²⁷;
- CB&I supported Reficar, when ASER eventually sued Reficar¹⁹²⁸.

b. Pipe spool fabrication (Boccard and Shaw)

1928. Reficar argues that CB&I was responsible for cost overruns arising from the contracts with Boccard and Shaw, because CB&I was late in the delivery of the engineering¹⁹²⁹.

1929. The Tribunal is not convinced.

1930. The Tribunal has found that CB&I has plausibly argued that in the initial stages of the Project, Reficar instructed it to introduce design changes, which required drawings to be revised and engineering deliverables being late: this finding is true not only for steel fabrication but also for pipe spool fabrication.

1931. In addition, CB&I argues that Reficar made delayed payments to the Vendors.

1932. The minutes from a meeting between Reficar and CB&I dated July 18-22, 2011 prove that CB&I was informing Reficar of the delays in obtaining the necessary inputs from the Vendors, in particular in the area of pipe spool fabrication:

¹⁹²⁶ CB&I cites to its letter to Reficar Ex. R-1849_06622 in which it offers to perform a portion of ASER's work on drawings; Reficar has not argued that this has not in fact happened.

¹⁹²⁷ ESOD, para. 527, citing to Ex. R-0837, p. 6. Reficar has not disputed CB&I's statements about hiring the additional employee or delegating additional inspection staff to ASER or its sub-fabricator's facilities.

¹⁹²⁸ Mr. Baker's testimony at Tr. 3607:1-5.

¹⁹²⁹ ESOC, paras. 281-285.

	<u>Piping:</u>
13	Internal 30% Model reviews not conducted. (Disciplines working up to the last minute to incorporate late vendor and Process data, Majority of the vendor data is Preliminary, P&ID's not officially issued IFD).
14	All lines associated with this review are considered preliminary awaiting IFD Process data and 1 st pass vendor information.
15	Stress / Hydraulic Reviews of critical lines not completed. (P&IDs not officially IFD, Line list data not available. Process and Mechanical data lacking.)
16	Preliminary structure modeling not completed. (Lacking good Vendor and Process line sizing data.)
17	Nozzle orientation studies not completed. (P&ID's not officially IFD, changes to vessel internals. Instrument sketches not issued)
18	Equipment modeling not completed to 1 st pass vendor data.
19	A/G, U/G Tie-points and demo requirements not field verified / confirmed. (Awaiting IFD process data)
20	Preliminary in line instrument data not available.

1933. CB&I avers that Shaw's and Boccard's delays were exacerbated by the late arrival of valves from another of Reficar's Vendors, whom Reficar had failed to pay for almost two years¹⁹³⁰. The Tribunal tends to give credence to CB&I's argument, which is supported by

- the minutes of a meeting between Reficar and CB&I of July 13, 2011, during which CB&I informed Reficar about the Vendor's complaints¹⁹³¹:

"Timely payment of invoices from Reficar specifically on Valve orders. Several invoices have been with Reficar for over 60 days. Vendor is threatening to place order on hold. Reference CB&I expediting alert issue July 1st, 2011. NEED to improve process" [Emphasis added; capitals in the original]; and

- a letter from CB&I to Reficar from March 23, 2012, reiterating delays in payments to the valve Vendor¹⁹³².

1934. Reficar brings a final accusation against CB&I, namely that the final quantities of the piping materials increased exponentially in comparison with the initial

¹⁹³⁰ Ex. R-1849_09547; Table 9.3 at WMC ER at pdf p. 516, citing to Ex. R-2954; WMC ER, paras. 1439-1442.

¹⁹³¹ Ex. R-0787, p. 21.

¹⁹³² Exs. Ex. R-1849_07275, with Attachments 1 through 3.

projections¹⁹³³. In a cost-reimbursable EPC Contract the risk of any cost overruns due to quantity increases lies with Reficar (except if there is a breach of the Cost Control Commitments – which do not apply to CB&I’s management of Vendors); thus, CB&I cannot be held liable for any amounts Reficar paid to the Vendors in excess of the initial estimations of their costs without the application of the Cost Control Commitments to procurement.

c. Automation (Invensys)

1935. Invensys was the supplier of Refinery process control systems¹⁹³⁴ responsible for automation of the Central Control Building¹⁹³⁵. Reficar argues that Invensys submitted numerous Change Orders due to CB&I’s late and deficient engineering¹⁹³⁶. Long International, Reficar’s expert, claims that Reficar paid excessive costs arising from “rework resulting from excessive data base revisions”¹⁹³⁷.

1936. The Tribunal is unconvinced.

1937. Reficar has failed to prove that CB&I failed to properly manage Invensys.

1938. According to Reficar, CB&I issued a total of 88 Change Orders related to the work of Invensys. Reficar does not identify the exact Change Orders, but refers to the report of its expert, Long International¹⁹³⁸, who in turn references the witness statement of Reficar’s Mr. Arenas¹⁹³⁹. Long International does not, however, analyse the findings of Mr. Arenas, or the data used by him.

1939. Be that as it may, CB&I provides an explanation for these multiple changes, which, for the reasons already explained, looks plausible: the existence of multiple design changes ordered by Reficar¹⁹⁴⁰.

d. Electrical substations (Powell)

1940. Powell Electrical Systems [“Powell”] was the supplier of prefabricated electrical substations for the Project¹⁹⁴¹.

1941. Reficar claims that CB&I should be held liable for a payment made to expedite delivery of certain substations: even though Reficar paid a premium for the substations to be delivered more quickly, due to CB&I’s failure to prepare the foundations, the substations could not be installed immediately and thus the premium was wasted¹⁹⁴².

¹⁹³³ CPHB, para. 290; ESOC, paras. 168, 170.

¹⁹³⁴ WMC ER, para. 1517.

¹⁹³⁵ LI ER, para. 1229.

¹⁹³⁶ CPHB, para. 287; ESOC, para. 218.

¹⁹³⁷ LI ER, para. 1231.

¹⁹³⁸ LI ER, para. 1230.

¹⁹³⁹ Arenas CWS, paras. 31-47.

¹⁹⁴⁰ ESOD, paras. 370-382 and references therein.

¹⁹⁴¹ LI ER, para. 1227.

¹⁹⁴² CPHB, para. 286.

1942. Once again, the Tribunal sides with CB&I.

1943. Respondents' expert, WMC, convincingly explains that the number and parameters of the substations were changed due to Reficar-directed changes to basic engineering¹⁹⁴³ – this constitutes a plausible justification for CB&I's delays in preparing the foundations.

1944. In addition, Reficar's witness, Mr. Arenas, appears to agree with CB&I's reasons for the delay: "[t]he main contributing factor to this CB&I failure was late vendor data yet again"¹⁹⁴⁴. Any risks of delayed provision of necessary data by Vendors lay with Reficar.

1945. In any event, Reficar accepted the substations-related Change Order¹⁹⁴⁵, which bars it from now claiming any of these costs as unreasonable or improper¹⁹⁴⁶.

* * *

1946. In sum, the Tribunal dismisses Reficar's claims for any of the four categories of cost overruns allegedly caused by CB&I's mismanagement of Vendors on the Project.

D. Other alleged breaches

1947. Apart from the four monetary claims, Reficar submits that CB&I committed additional breaches of its procurement obligations.

1948. First, Reficar avers that CB&I performed its procurement duties with significant delays¹⁹⁴⁷.

1949. The question of delays is discussed elsewhere by the Tribunal as part of prolongation costs (Section VII.2.1.3.3.3.H) and delay liquidated damages (Section VII.2.3); Reficar itself has presented a separate calculation for the damages caused by delays to the Project, which encompasses delays caused by any procurement-related activities.

1950. Second, Reficar argues that CB&I breached its procurement obligations because its organizational structure was deficient¹⁹⁴⁸.

1951. The argument is baseless. The changes to the organizational structure occurred before the EPC Contract¹⁹⁴⁹. In any event, the Tribunal sees no cause-and-effect relation between Reficar's claim for Vendor cost overruns and CB&I's organizational structure for procurement.

¹⁹⁴³ WMC ER, paras. 950-955, 963-901.

¹⁹⁴⁴ Arenas CWS, para. 50.

¹⁹⁴⁵ Ex. C-0570.

¹⁹⁴⁶ WMC ER, para. 1521.

¹⁹⁴⁷ ESOC, paras. 665-666.

¹⁹⁴⁸ ESOC, para. 664.

¹⁹⁴⁹ See Moore CWS, para. 24, referencing the Procurement Execution Plan, Rev. 4 from April 2009, Ex. C-1081 as opposed to Rev. 5 from January 2010, Ex. C-1082. The EPC Agreement was entered into in June 2010.

1952. Third, Reficar also argues that CB&I deliberately concealed its procurement failures when it failed to submit or submitted inadequate, incorrect and incomplete reports required by the EPC Contract¹⁹⁵⁰.

1953. The Tribunal is unconvinced. Reficar has failed to point the Tribunal to any EPC Contract provisions requiring the submission of the specific reports that Reficar argues are “critical tools”¹⁹⁵¹. Even if, *arguendo*, CB&I had issued certain incomplete reports, this would not give rise to Reficar’s recovery of the damages it seeks for Vendor underperformance.

2. BACK-CHARGES

1954. Reficar brings one more procurement-related claim, for Back-Charges, in the amount of USD 8.74 million¹⁹⁵².

1955. **Back-Charges** are the labour and material costs incurred by Reficar to modify or correct Vendor materials or equipment that failed to adhere to the purchase specifications, such as incorrectly fabricated structural steel or shipping/freight damages¹⁹⁵³. In addition, Back-Charges includes costs incurred for materials and equipment that were never delivered by the Vendors¹⁹⁵⁴.

2.1. THE PARTIES’ POSITIONS

1956. Reficar says that out of the approximately 830 Back-Charges generated during the Project, CB&I only closed out some 300; the rest was left for Reficar to manage, and, of those, some 350 Back-Charges were rejected by the Vendors¹⁹⁵⁵.

1957. CB&I retorts by saying that the ultimate responsibility for Back-Charges remained with Reficar and, in any event, Reficar has failed to prove CB&I’s responsibility for any of the sums it claims under this category¹⁹⁵⁶.

¹⁹⁵⁰ ESOC, para. 667.

¹⁹⁵¹ ESOC, para. 667, citing to Moore CWS, para. 50 (in ESOC, the citation is wrong as it points to paras. 80-83; the witness statement ends with para. 55).

¹⁹⁵² Reficar discusses the Back-Charges claim within its argumentation on improper EPC costs in materials management, see CPHB, paras. 314, 317.

At the same time, in the claims table in communication C-175, at p. 11, Reficar includes “Back-charges” as part of the “Breach” damages, but places them in a category separate from “Improper EPC Costs”.

CB&I in its latest submission understands that Back-Charges form part of improper EPC costs – see RPHB, para. 541:

“Reficar includes within its purported quantification of “Improper EPC Costs” “Back Charges [...]”.

In the ESOD, however, CB&I treated Back-Charges as a category separate from improper costs, see ESOD, para. 1517:

“In addition to seeking the return of the allegedly unreasonable or improper costs, Reficar also seeks, among other things, any and all damages and costs to which it claims it is entitled under applicable law, including, but not limited to its [...] (6) “vendor back-charges””.

It appears that for Reficar uses for the totality of Improper EPC Costs (communication C-175, p. 11) does not include the Back-Charges and that these costs are a separate category.

¹⁹⁵³ Ex. C-1311, p. 2.

¹⁹⁵⁴ CPHB, para. 314, citing to Arenas CWS, para. 15.

¹⁹⁵⁵ ESOC, para. 252.

¹⁹⁵⁶ RPHB, paras. 544-546.

1958. According to Reficar, the EPC Contract and CB&I's internal **Back-Charge Procedure**¹⁹⁵⁷ required CB&I

- to act as Reficar's representative in Back-Charge claims, and
- to maintain a Back-Charge log,

both of which CB&I failed to do¹⁹⁵⁸.

1959. Reficar has proffered the witness testimony of its Project engineer, Mr. Arenas¹⁹⁵⁹, and two Excel documents cited in his statement as proof of CB&I's failures¹⁹⁶⁰.

1960. CB&I argues that Reficar has failed to prove that CB&I did not comply with its Back-Charges-related duties¹⁹⁶¹. CB&I attacks the credibility of the Excel compilations presented by Reficar¹⁹⁶² and draws the Tribunal's attention to the fact that none of Reficar's experts has presented an analysis of the Back-Charge claims¹⁹⁶³.

1961. CB&I presents the testimony of its Project Procurement Manager, Mr. Smith, who has testified that ultimately, the collection of Back-Charges was Reficar's responsibility¹⁹⁶⁴.

2.2. DISCUSSION

1962. The EPC Agreement contains two types of obligations for CB&I that affect Back-Charges: the management of Vendors (A.) and record-keeping (B.).

A. Management of Vendors

1963. TC 26.4.1 analysed in the previous Section generally obligates CB&I to "act as [Reficar's] representative in Managing [...] Vendors"¹⁹⁶⁵.

1964. The obligation to "manage" under TC 26.4.3 constitutes a generic obligation to act with the diligence of a prudent, diligent and reasonable EPC contractor performing similar services¹⁹⁶⁶.

1965. Reficar argues that CB&I breached its obligation to manage Vendors, because Reficar was required to close-out around 530 Back-Charges, and ultimately failed to recover the costs of some 300 Back-Charges. CB&I says its Back-Charge-related

¹⁹⁵⁷ CPHB, para. 315, citing to Ex. C-1311, clause 4.9.1.

¹⁹⁵⁸ CPHB, para. 315, citing to TC 26.4.1, JX-002, p. 204; JX-004, p. 187 and TC 59.11, JX-002, pp. 240-241; JX-004, p. 217.

¹⁹⁵⁹ Mr. Arenas joined the Project as an Instrumentation and Control Engineer and became the Engineering Director in January 2014; see Arenas CWS, para. 4.

¹⁹⁶⁰ CPHB, paras. 314-316, citing to Arenas CWS, Ex. C-1059 and Ex. C-1491; Reply, para. 912 with fn.1876; ESOC, paras. 250-258; 668.

¹⁹⁶¹ RPHB, paras. 541-546.

¹⁹⁶² RPHB, paras. 542-543.

¹⁹⁶³ RPHB, para. 541.

¹⁹⁶⁴ RPHB, para. 545, citing to Smith RWS, paras. 73-75, 79, 81.

¹⁹⁶⁵ JX-002, p. 204; JX-004, p. 187.

¹⁹⁶⁶ JX-002, p. 205; JX-004, p. 188.

duties were limited to support activities and that it cannot be held liable for any unsuccessful Back-Charges.

1966. As an initial matter, it is dubious whether the obligation to act as Reficar's representative in managing Vendors under TC 26.4.1 includes the entirety of the Back-Charge process.

1967. TC 26.4.3 specifies that "managing" is limited to "taking [...] steps in the Contractor's power" – and CB&I argues that the final steps in the process depended on Reficar. Additionally, the obligation to "manage" explicitly excludes "entering into a formal dispute resolution procedure with [the Vendor]"¹⁹⁶⁷, meaning that CB&I's role in Back-Charges did not extend to initiating disputes.

1968. Since Back-Charges are not regulated in detail in the EPC Agreement and since Reficar had more involvement in procurement, as opposed to engineering and construction, the Tribunal tends to give credence to CB&I's argument.

Mr. Smith's explanation

1969. CB&I's witness, Mr. Smith, presents a cohesive account of the Back-Charges process based on CB&I's internal Back-Charge procedure¹⁹⁶⁸:

- first, a defect was discovered (a.),
- then this defect was notified using proper forms (b.),
- such defect was reviewed and discussed with the Vendor (c.),
- and corrective action was performed either by the Vendor, an approved subcontractor or CB&I itself (d.),
- then, CB&I developed the formal Back-Charge claim and engaged in negotiations with the Vendor (e.), and
- finally, Reficar would collect the Back-Charge in the format it found optimal (f.).

1970. Mr. Smith avers that CB&I performed steps (a.) through (d.) on Reficar's behalf but that steps (e.) and (f.) were under Reficar's control¹⁹⁶⁹.

1971. The Tribunal is convinced by Mr. Smith's account.

1972. It was undoubtedly up to Reficar to decide on step (f.); only Reficar could take the decision whether certain Back-Charges would be set-off against outstanding amounts with a Vendor, or collected via a Back-Charge invoice – in fact, CB&I has presented a letter from 2012 in which Reficar gave CB&I instructions on how to collect Back-Charges in a few select cases¹⁹⁷⁰.

¹⁹⁶⁷ JX-002, p. 205, JX-004, p. 188.

¹⁹⁶⁸ Smith RWS, paras. 77-79, 81, citing to Ex. C-1311, pp. 2-5.

¹⁹⁶⁹ Smith RWS, paras. 79-81.

¹⁹⁷⁰ Ex. R-2453.

1973. That Reficar decided on how to collect the Back-Charges also tends to suggest that Reficar was involved in step (e.), the negotiations with the Vendors.

1974. There is an additional piece of evidence.

1975. Reficar's involvement in the process of Back-Charges has already been discussed in Section VII.2.1.3.3.3.B.h *supra*, where one of the analysed pieces of evidence was a letter from Reficar to the insurer claiming reimbursement for the damage done to the refractory equipment. This piece of evidence further proves Reficar's leading role in this area.

[In addition, Reficar's letter concerned one of the items now listed by Reficar in the log used as key evidence for this Back-Charges claim – Reficar appears to be asking for double recovery, which the Tribunal cannot grant¹⁹⁷¹.]

1976. Thus, even though CB&I was obligated to represent Reficar in its relations with Vendors, CB&I's obligations were limited to steps that were "in the Contractor's power". CB&I does not bear the burden of Back-Charges not collected from the Vendors.

Reficar's counterargument

1977. Reficar presents the testimony of one of its engineers, Mr. Arenas, to allege that CB&I is responsible for the roughly 350 Back-Charges rejected by Vendors for three reasons¹⁹⁷²:

- Excessive delay in presenting the Back-Charge (cases of 1-3 years of delay were reported), after the warranties had expired,
- Instances when CB&I performed inspections without informing the Vendor, thus invalidating the warranties, and
- Discrepancies between the requests CB&I issued and Project specifications, which were not the fault of the Vendor.

1978. Mr. Arenas' source for the above allegations is an Excel document titled "Spreadsheet of Outstanding Backcharges"¹⁹⁷³. This document was updated by Reficar when it submitted the "Updated Back-Charge Log" with its Reply¹⁹⁷⁴.

1979. For the majority of the Back-Charge rows, the conclusion in the "Background" column is that either "[n]o additional information was provided by CB&I", "[n]o documents, data or information whatsoever were found to support the Back-Charge" or "[n]o further action from CB&I"¹⁹⁷⁵.

¹⁹⁷¹ See Ex. C-1491, rows 13, 24, 29, 47, 50, 52, 54, among others, for "KIRCHNER ITALIA S.P.A.".

¹⁹⁷² Arenas CWS, para. 20.

¹⁹⁷³ Ex. C-1059.

¹⁹⁷⁴ Ex. C-1491.

¹⁹⁷⁵ See e.g., rows 3, 6-41.

1980. Neither the original nor the updated Excel document contains a source of the information, its date, or references to any underlying evidence, and thus, both have low probative value.
1981. Reficar has, in general, refrained from making any arguments in its submissions regarding any particular Back-Charges and instead presents the amalgamated number of all the rejected Back-Charges, attributing full responsibility to CB&I.
1982. The only individual reference is to a local arbitration award, in which the tribunal found that Reficar was not entitled to damages from a local supplier, who had provided faulty panels for the Refinery Project, because CB&I failed to timely inspect the panels' quality and later stored them in improper conditions¹⁹⁷⁶; Reficar, however, appears to have dropped its discrete claim for losses connected with that arbitration¹⁹⁷⁷.
1983. Reficar's experts have also not provided any analysis of the Back-Charges claim¹⁹⁷⁸, further decreasing its credibility.
1984. In view of the above, the Tribunal finds that Reficar has failed to prove that CB&I breached its obligations with regard to Back-Charges and, as a result, the Back-Charges claim is rejected.

B. Record-keeping

1985. TC 59.1 requires that CB&I "maintain such records and accounts as it is required to maintain in accordance with applicable Laws"¹⁹⁷⁹. Additionally, CB&I's Back-Charge Procedure document reiterates the obligation for CB&I to maintain "adequate detail to support the case for the back charge"¹⁹⁸⁰.
1986. Reficar points to TC 59.1 as a source of CB&I's obligation to maintain a Back-Charge log. The provision itself does not explicitly contain such a requirement; instead, it only obligates CB&I to "maintain such records and accounts as it is required to maintain in accordance with applicable Laws"¹⁹⁸¹ – and Reficar has not brought to the Tribunal's attention any applicable law that would require such log-keeping by CB&I.
1987. Reficar also presents CB&I's Back-Charge Procedure¹⁹⁸² as a source for CB&I's obligation of record keeping for Back-Charges. This document, however, is an internal CB&I policy, that cannot on its own be construed as a source for CB&I's obligations.
1988. In any event, CB&I has successfully demonstrated that it in fact "maintained a back-charge log and supporting documentation" – the Excel document from the year

¹⁹⁷⁶ ESOC, paras. 254-258, citing to CL-0286.

¹⁹⁷⁷ Under ESOC, para. 669, Reficar claimed USD 3.51 million in connection with the local arbitration. This number is no longer listed in Reficar's most recent heads of claims amounts in the CPHB.

¹⁹⁷⁸ Long International makes references to certain back-charges in its analysis on PCS-related costs, see LI ER, Section 9.5, e.g., Table 9.5-16 – but these are not corroborated by any analysis.

¹⁹⁷⁹ JX-002, p. 239; JX-004, p. 216.

¹⁹⁸⁰ Ex. C-1311, Clause 4.9.1 at p. 5.

¹⁹⁸¹ JX-002, p. 239; JX-004, p. 216.

¹⁹⁸² Ex. C-1311, Clause 4.9.1 at p. 5.

2012 it has submitted in the arbitration is sufficient proof of CB&I contemporaneously keeping Back-Charge records¹⁹⁸³.

1989. Mr. Smith also says Reficar was updated regularly through iDocs and in weekly status report meetings¹⁹⁸⁴, which further corroborates the finding that CB&I did keep sufficient records of the Back-Charges.

VII.2.6. INDEMNIFICATION CLAIMS

1990. Finally, Reficar brings an indemnification claim for CB&I's alleged breaches of Colombian and New York law. In particular, Reficar requests the Tribunal to issue a declaration that, in accordance with TC 14.1¹⁹⁸⁵:

- CB&I must fully indemnify Reficar for any judgment or decision by Colombian courts or any other government entity against the Owner Group that was caused by CB&I's violation of any applicable laws; and
- CB&I is obliged to continue to indemnify and defend Reficar for and from claims pending in Colombian courts presented by workers hired by CB&I during the Project.

1991. Similarly, CB&I makes a request that the Tribunal issue a declaration that:

- CB&I does not owe Reficar any defense or indemnity under the EPC Contract or applicable law¹⁹⁸⁶;
- Reficar owes CB&I such defense and indemnity as is required by the EPC Contract or applicable law¹⁹⁸⁷;
- CB&I is entitled to reimbursement for costs and expenses incurred in responding to the Colombian government investigations of Reficar¹⁹⁸⁸; and
- Reficar is obligated to pay all costs, expenses, fines, or penalties that CB&I incurs in responding to the Colombian government investigations of Ecopetrol, Reficar, or their employees and representatives¹⁹⁸⁹.

1992. The Tribunal will first summarize the Parties' positions (1.) and then enter into a discussion (2.).

1. THE PARTIES' POSITIONS

¹⁹⁸³ Ex. R-2451.

¹⁹⁸⁴ Smith RWS, paras. 74-75.

¹⁹⁸⁵ CPHB, para. 532(18 and 19).

¹⁹⁸⁶ ESOD, para. 1612(p).

¹⁹⁸⁷ ESOD, para. 1612(q).

¹⁹⁸⁸ ESOD, para. 1612(ff).

¹⁹⁸⁹ ESOD, para. 1612(gg).

1993. Reficar argues that CB&I should be held liable under TC 14.1 to the extent that its Works do not comply with the “applicable laws” under either Colombian or New York law¹⁹⁹⁰.

1994. According to Claimant, various Colombian governmental authorities, including the *Fiscalía General de la Nación* and the *Contraloría*, are investigating or have already investigated whether any performance of the Works on the Project violated applicable laws in Colombia¹⁹⁹¹.

1995. Reficar argues that, if those authorities impose financial penalties or demands on Reficar, CB&I should indemnify Reficar in accordance with TC 14.1 of the EPC Contract¹⁹⁹².

1996. CB&I considers this request to be premature¹⁹⁹³; Reficar appears to rely on the hypothetical possibility of a future finding of its liability under Colombian law¹⁹⁹⁴. According to CB&I, the Tribunal should not assess indemnity claims in abstract¹⁹⁹⁵.

1997. CB&I further avers that Reficar’s indemnification claim subjects CB&I to a *probatio diabolica*; Respondents have no means of defending themselves as, thus far, Claimant has failed to¹⁹⁹⁶:

- Present evidence of specific illegal acts;
- Connect such acts to a law that CB&I has allegedly violated;
- Demand quantified damages; or
- Establish a connection between alleged damages and CB&I’s indemnity obligations.

1998. As a response, Reficar alleges that it has already incurred significant expenses due to government investigations in Colombia and CB&I is liable for those costs under TC 14.1 of the EPC Contract.

1999. Finally, CB&I also requests that the Tribunal declare that Reficar should defend and indemnify CB&I as required by the EPC Contract or the applicable law¹⁹⁹⁷.

2. DISCUSSION

2000. The Tribunal will first analyse the indemnification commitments of both Parties under the Contract (2.1.) and, on the basis of such analysis, conclude that both Parties’ declaratory relief should be partially granted (2.2.).

¹⁹⁹⁰ Reply, para. 997.

¹⁹⁹¹ ESOC, para. 826; CPHB, para. 514.

¹⁹⁹² CPHB, para. 514.

¹⁹⁹³ ESOD, para. 1483.

¹⁹⁹⁴ ESOD, para. 1482.

¹⁹⁹⁵ ESOD, para. 1484.

¹⁹⁹⁶ RPHB, para. 664.

¹⁹⁹⁷ ESOD, para. 1612 (p. and q.).

2.1. THE INDEMNIFICATION COMMITMENTS

2001. The EPC Contract contains several provisions whereby a Party commits to indemnify the other in case certain “Claims” arise directly or indirectly from distinct breaches. The Parties have pleaded their indemnification claims under TC 15¹⁹⁹⁸ (i.) and TC 14¹⁹⁹⁹ (ii.). The Tribunal will refer to these indemnification obligations as the “**Indemnification Commitments**”.

2002. (i.) Pursuant to TC 15, both Parties committed to defend, indemnify and hold the other Party’s group members harmless against all Claims arising directly or indirectly in respect of certain Indemnifiable Events listed in TC 15.1.1, 15.1.2 (both in favour of the Owner Group) and TC 15.2 (in favour of the Contractor Group).

2003. Under the EPC Contract, the term “Claims” is defined as:

“[...] all actions, suits, claims, administrative proceedings, demands, liabilities, security interests, liens, losses, damages, defects, fines, penalties, costs and expenses of any nature (including legal fees and expenses)”.

2004. “Contractor Group”²⁰⁰⁰ and “Owner Group”²⁰⁰¹, are defined as follows:

“‘Contractor Group’ means the Contractor, its Affiliates, each Lower Tier Subcontractor, and the Associated Persons and their respective successors and assigns”;

“‘Owner Group’ means the Owner, its Affiliates and management consultants and Associated Persons (other than any member of the Contractor Group), and their respective successors and assigns”.

2005. (ii.) TC 14.1 provides that the Contractor and each of the Contractor Group members commits to defend, protect, indemnify and hold the Owner Group harmless from and against any Claims²⁰⁰² due to non-compliance with applicable Laws²⁰⁰³. The Owner also assumes a substantially similar Indemnification Commitment in favour of the Contractor Group members under TC 14.2.

2006. The EPC Contract defines “Laws” as²⁰⁰⁴:

“[...] the constitution, all existing laws, statutes, decrees, administrative acts, legal codes, ordinances, rules, regulations, lawful orders, permits, licenses, and other legal requirements or authorizations, as amended from time to time, of all federal, national, central, state, commonwealth, provincial, county, parish, canton, departmental, district, municipal, industrial, local and any other governmental agencies and authorities that are applicable to this

¹⁹⁹⁸ See, for example, CPHB, para. 514 (footnote 926); ESOD, para. 1016.

¹⁹⁹⁹ See, for example, ESOC, para. 829; ESOD, para. 1481.

²⁰⁰⁰ JX-002, p. 162; JX-004, p. 148.

²⁰⁰¹ JX-002, p. 168; JX-004, p. 154.

²⁰⁰² TC 14.1 and TC 14.2 extend the Indemnification Commitments to “(…) any Claims, fines, and penalties (…).” “Fines, and penalties” are already covered by the Claims definition in the EPC Contract.

²⁰⁰³ JX-002, p. 186 ; JX-004, p. 172.

²⁰⁰⁴ JX-002, p. 167 ; JX-004, p. 152.

Agreement, the Parties, the Work or any of the Parties' obligations under this Agreement (and "lawful" and "unlawful" shall be construed accordingly) [Emphasis added].

2007. Thus, the Parties' compliance with the obligations under the EPC Contract are also covered by the Indemnification Commitments of TC 14.

Survival of indemnity rights and obligations

2008. Finally, under TC 76, both Parties agreed that their rights and obligations²⁰⁰⁵

"[...] relating to any waivers and disclaimers of liability, releases from liability, limitations of liability, indemnities, patent indemnities, confidentiality and to insurance" [Emphasis added]

would remain in full force and effect after the completion or termination of the EPC Contract²⁰⁰⁶

"so as to protect each Contractor Group member and each Owner Groups member from any loss or liability that it may incur after this Agreement is assigned, completed or terminated in accordance with its terms."

2009. Summing up, the Indemnification Commitments survive the conclusion of the EPC Contract and include all commitments of one of the Parties under the EPC Contract to defend, indemnify and hold the other Party or its Group members harmless against all Claims arising out of an Indemnifiable Event.

2.2. TRIBUNAL'S DECISION

2010. Having portrayed the scope of the Indemnification Commitments, the Tribunal needs to determine if it grants the declaratory reliefs requested.

2011. Reficar requests that the Tribunal declare that CB&I should comply with its obligation to fully indemnify any Owner Group member if any payment of a "Claim", fine or penalty is imposed for CB&I's failure to adhere to the applicable laws²⁰⁰⁷.

2012. Although CB&I objects to this request for being "premature"²⁰⁰⁸, Respondents also request a similar declaration from the Tribunal: that Reficar should defend and indemnify CB&I as required by the EPC Contract or the applicable law²⁰⁰⁹.

2013. Thus, the Parties' positions are closer than they seem, and the Tribunal will, in turn, partially agree with both Parties:

- Reficar's request for this declaratory relief seems reasonable: this Award has determined that CB&I has breached the Cost Control Commitments; pursuant to the definition of Laws contained in the EPC Contract, this contractual

²⁰⁰⁵ JX-002, p. 266; JX-004, p. 242.

²⁰⁰⁶ JX-002, p. 266; JX-004, p. 242.

²⁰⁰⁷ ESOC, para. 829.

²⁰⁰⁸ ESOD, para. 1483.

²⁰⁰⁹ ESOD, para. 1612 (p. and q.).

breach is automatically also a breach of the applicable Laws: to the extent that this breach causes harm to the Owner Group through “Claims”, then CB&I must comply with the Indemnification Commitments;

- At the same time, the Tribunal has also concluded that in failing to pay CB&I’s invoices for reasonable and proper costs, Reficar did not fully comply with the EPC Contract, *i.e.*, the applicable Laws; hence, CB&I’s plea for declaratory relief also looks reasonable.

2014. In abstract, these breaches seem to impact the Indemnification Commitments of both Parties under the EPC Contract: if a Claim covered by an Indemnifiable Event arises out of these breaches, then the breaching Party must comply with its Indemnification Commitments.

2015. Under Section VIII.2.5 *infra*, and in accordance with TC 76, the Tribunal will determine that the Indemnification Commitments under the EPC Contract survive the liquidation of the Contract.

2016. Therefore, the Tribunal sees no difficulty in declaring that the breaching Party must comply with its Indemnification Commitments, to the extent that the breaches determined in this Award give rise to an Indemnifiable Event.

CB&I’s counterargument

2017. CB&I asks the Tribunal to dismiss Reficar’s request for declaratory relief for being premature. CB&I has not denied that the obligation to indemnify the counterparty exists under the EPC Contract (and even requests a similar declaratory relief to the Tribunal), but states that it is too early to determine responsibility under the Indemnity Commitments.

2018. The Tribunal agrees with CB&I that it would be premature to order a precise indemnification payment and it would contravene the Parties’ own request, as no Party has attempted to quantify any of their indemnification rights.

2019. However, and considering the breaches determined in this Award, it is not premature to declare that the Parties are bound by the Indemnification Commitments under the EPC Contract.

2020. In light of the above, the Tribunal declares that both Parties should continue to comply with their respective Indemnification Commitments under the EPC Contract, to the extent that the breaches determined in this Award trigger an Indemnifiable Event.

VII.3. CLAIMS OUTSIDE THE TRIBUNAL'S POWER

2021. Reficar has requested relief related to *lucro cesante*, or lost profits, and cost of capital both under its pre-contractual and contractual liability claims. Additionally, within the Work Completion claim, Reficar also requests relief for damages regarding its PCS-related costs²⁰¹⁰.

2022. The Tribunal has already found that CB&I's conduct in the pre-contractual stage did not amount to deceit, was incapable of resulting in *dolo incidental* and did not constitute a violation of good faith (see Section VII.1 *supra*). Similarly, the Tribunal has also adjudicated the cost-related portion of Reficar's Work Completion Claim (See Section VII.2.4 *supra*).

2023. Thus, the following section will only focus on Reficar's lost profits, cost of capital and PCS-related claims related to its contractual liability claim.

1. BACKGROUND

2024. According to Reficar, CB&I's breaches of the EPC Contract prevented the completion of the works by the Mechanical Completion date and resulted in lost profits to Reficar due to the delay of the operation of the Refinery²⁰¹¹. Therefore, Reficar requests USD 809.81 million in lost profits damages²⁰¹².

2025. Additionally, Reficar brings two cost of capital claims, averring that:

- Had it earned the lost profits, it would have had the ability to invest these profits back into the company²⁰¹³ (i.); and
- It incurred increased financing costs because of CB&I's breach of the Cost Control Commitments²⁰¹⁴ (ii.).

2026. For the above claims, Reficar argues that it is entitled to (i.) USD 182.48 million; and (ii.) 325.01 million in damages²⁰¹⁵.

2027. Similarly, Reficar argues that CB&I's failures to meet the Mechanical Completion date resulted in²⁰¹⁶:

- Delay-related PCS costs, for which it requests USD 109.88 million in damages,
- Decreased productivity of Reficar's PCS contractors, which led to damages in the amount of USD 42.59 million, and

²⁰¹⁰ CPHB, para. 404.

²⁰¹¹ CPHB, para. 157.

²⁰¹² CPHB, para. 159; this includes categories of lost profits, cost on capital on lost profits, lost revenue – electricity sales and an offset for profits from extended life.

²⁰¹³ Kenrich ER, para. 5.1.

²⁰¹⁴ ESOC, para. 751.

²⁰¹⁵ CPHB, para. 85.

²⁰¹⁶ CPHB, para. 404.

- Additional impacts to its PCS Contractors, for which it requests USD 10.32 million²⁰¹⁷.

2028. CB&I objects to the Tribunal's authority to grant the abovementioned relief in the form of indirect damages, lost profits and cost of capital²⁰¹⁸; according to CB&I, the DRA bars such relief or damages²⁰¹⁹.

2029. Reficar brings two defenses to CB&I's objection:

- First, restrictions under the DRA do not limit the Tribunal's power to award the sought damages; and
- Second, in any event, its claims for lost profits and cost of capital have the form of direct damages and are not limited by the alleged restrictions in the DRA.

2030. As determined in Section IV.3 *supra*, the Tribunal will apply New York law to adjudicate this issue. In doing so, the Tribunal will uphold Respondent's objection and conclude that it does not have the authority to grant the relief requested by Claimant under the current section.

2031. The Tribunal's findings mean that Reficar's claims for lost profits, cost of capital and PCS-related costs are outside the Tribunal's power; as a result, the Tribunal will not address them.

2. SCOPE OF THE DRA

2032. CB&I argues that Reficar cannot recover *lucro cesante* or lost profits as Section 4.13 of the DRA expressly precludes the Tribunal from awarding consequential damages to Reficar: CB&I avers that the provision unambiguously restricts the Tribunal's remedial power, precluding any award of "special, indirect, [and] consequential" damages"²⁰²⁰.

2033. Furthermore, Respondents submit that TC 8.2 of the EPC Contract independently bars Reficar from recovering lost profits and consequential damages. The Parties expressly waived all claims for

"any loss of profit [...] loss of opportunity, loss of revenue, loss of production"

and, insofar as not already covered, also

"special, consequential, indirect, incidental [...], costs, losses, or expenses [...] arising out of or in connection with this Agreement"²⁰²¹.

²⁰¹⁷ The Tribunal notes that a certain number of these claims have been granted by the Tribunal in the Section on the Work Completion Claim as they in fact represented the costs incurred by Reficar on its contractors correcting the defects CB&I refused to make-good.

²⁰¹⁸ TofR, para. 44; RPHB, para. 214 and 225.

²⁰¹⁹ Communication R-165, p. 6; RPHB, para. 225.

²⁰²⁰ RPHB, paras. 157, 164.

²⁰²¹ RPHB, para. 531.

Accordingly, the express exclusion agreed by the Parties precludes the recovery of any such damages²⁰²².

2034. On the other hand, Claimant avers that the purported limitations under Section 4.13 of the DRA and TC 8.2 of the EPC Contract are not restrictions to the Tribunal's authority; rather, they should be treated similarly to a limitation of liability clause²⁰²³.

2035. It is Reficar's position that CB&I committed *culpa grave*/gross negligence and *dolo*/willful misconduct when it acted with systemic and reckless indifference to cost and schedule throughout the execution of the Project²⁰²⁴. In this context, Reficar avers that Section 4.13 of the DRA and TC 8.2 of the EPC Contract are exculpatory provisions under New York law²⁰²⁵; these clauses are found unenforceable when they are applied to grant immunity for acts that "smack of intentional wrongdoing"²⁰²⁶. Thus, New York law precludes CB&I from relying on them to shield itself from liability for lost profits²⁰²⁷.

2036. Claimant further submits that it is irrelevant that the clauses themselves do not contain this exception, as New York courts will read in an exception to exculpatory clauses in the context of willful misconduct or gross negligence²⁰²⁸.

Discussion

2037. The Tribunal sides, partially, with each Party:

2038. (i) Regarding the waiver to claim lost profits and consequential damages contained in TC 8.2.1, Claimant is correct in saying that the waiver is to be treated as a liability limitation. Liability limitations are unenforceable when the liability stems from a breach carried out with *culpa grave* or *dolo* under Colombian law or with gross negligence or willful misconduct under New York law²⁰²⁹.

2039. Thus, the Tribunal agrees with Reficar that, in principle, if a breach with *culpa grave*/gross negligence or *dolo*/willful misconduct is established, Claimant would be entitled to claim lost profits, cost of capital and any other remedy available under Colombian or New York, and any contractual liability limitations would be lifted.

2040. (ii) The limitation of the Tribunal's authority, however, is a different issue. Here, the Tribunal sides with CB&I.

2041. In the DRA the Parties decided to narrow the Tribunal's authority and to exclude certain issues from its powers²⁰³⁰:

²⁰²² RPHB, para. 532.

²⁰²³ Reply, para. 958; Communication C-174, p. 4.

²⁰²⁴ Communication C-174, p. 4.

²⁰²⁵ Reply, para. 957.

²⁰²⁶ Reply, para. 957.

²⁰²⁷ Communication C-174, p. 5.

²⁰²⁸ Reply, para. 958.

²⁰²⁹ See discussion at Section VIII.1.2.2.

²⁰³⁰ Section 4.13 of the DRA; JX-007, p. 11.

“The Arbitral Tribunal shall neither have nor exercise any power to act as *amicable compositeur* or *ex aequo et bono*, or to award special, indirect, consequential or punitive damages” [Emphasis added].

2042. Reficar now avers that the exclusion shown in the arbitration agreement should be treated as a liability limitation, subject therefore to lifting in case of *culpa grave* or *dolo* breaches.

2043. The Tribunal does not agree: there is no evidence which suggests that the exclusion of matters from the Tribunal’s purview should be tantamount to an exclusion of liability. Questions of liability are a separate issue, unaffected by the arbitration agreement and the choice for a particular forum. And here the Parties validly decided that this Tribunal would lack the power to hear claims for indirect or consequential damages. This restriction of the Tribunal’s powers cannot be overturned because CB&I acted with *culpa grave* or *dolo*.

2044. So, the only two questions remaining are whether:

- an exclusion of indirect or consequential damages is permissible (A.), and if so,
- whether Reficar’s claims for loss of profit, cost of capital and PCS-related costs are “indirect or consequential damages”, pursuant to Section 4.13 of the DRA (B.).

Since the DRA is subject to New York law, the Tribunal will take its decision pursuant to New York law.

A. Exclusion of indirect or consequential damages

2045. The exclusion of claims for indirect or consequential damages is not uncommon in New York law. According to *Mayer* and *Tabataba*, lost profits

“are ordinarily a form of special damages that a plaintiff must specifically plead and that parties can exclude as damages through a contractual limitation of liability provisions”²⁰³¹.

2046. Since New York law accepts that Parties voluntarily exclude those claims from the catalogue of remedies available to them, there should be no discussion that Parties can equally decide to carve out those claims from the Tribunal’s authority. The Parties are, thus, free to agree on the width of the scope of the arbitration agreement.

2047. In fact, Reficar itself has acknowledged that Section 4.13 of the DRA has an impact on the Tribunal’s authority: throughout its pleadings, Reficar has recognized that Section 4.13 limited “the Tribunal’s authority to award punitive damages”²⁰³². Because of this, Reficar agreed not to request punitive damages in this arbitration.

²⁰³¹ RL-777, Mayer, T. and Tabataba, F. in Haig, R., “New York Practice Series – Commercial Litigation in New York State Courts”, Chapter 54, Compensatory Damages, para. 54:17.

²⁰³² ESOC, para. 824; CPHB, para. 512.

2048. But, in accordance with the express wording of the Parties' agreement, the restrictions on the Tribunal's authority are not limited to the punitive damages; the same limitation applies to indirect or consequential damages.

B. Tribunal's remedial powers

2049. Having determined that the Tribunal has no authority to award indirect or consequential damages, the Tribunal will analyse if Reficar's lost profits, cost of capital and PCS-related claims fall within this limitation.

a. The Parties' positions

2050. CB&I submits that Reficar is claiming indirect or consequential damages by seeking an award on lost profits, cost of capital and PCS-related costs²⁰³³.

2051. Respondents argue that New York courts have consistently concluded that lost profits are consequential damages, especially when they result from collateral business relationships, such as a separate agreement with a non-party²⁰³⁴; CB&I further avers that New York courts treat lost profits as direct damages only in rare cases, where the "non-breaching party bargained for [lost] profits and they are the direct and immediate fruits of the contract"²⁰³⁵.

2052. Thus, CB&I alleges that Reficar's purported lost profits, cost of capital and PCS-related costs claims fall directly within the scope of this restriction on the Tribunal's remedial power²⁰³⁶.

2053. Reficar refutes CB&I's position, by arguing that *lucro cesante* and lost profits are forms of direct damages; thus, they are not affected by the restrictions set forth under Section 4.13 of the DRA and TC 8.2 of the EPC Contract²⁰³⁷.

2054. Reficar avers that, under New York law, lost profits may either be direct or consequential damages²⁰³⁸; to consider lost profits as direct damages²⁰³⁹:

- The non-breaching party must have bargained for such right: *lucro cesante* claims were clearly in the contemplation of the Parties, as shown by the extensive discussion of the internal rate of return prior to the execution of the EPC Contract²⁰⁴⁰; and
- They should be direct and immediate fruits of the contract: the *lucro cesante* claims are the direct return or gain that was not obtained due to CB&I's improper conduct²⁰⁴¹.

²⁰³³ RPHB, para. 214 and 225.

²⁰³⁴ RPHB, para. 158.

²⁰³⁵ RPHB, para. 159.

²⁰³⁶ Communication R-165, p. 6.

²⁰³⁷ CPHB, para. 159.

²⁰³⁸ Communication C-184, p. 2.

²⁰³⁹ Communication C-184, p. 2.

²⁰⁴⁰ ESOC, fn. 1774; C-0024.

²⁰⁴¹ Communication C-184, p. 3.

2055. Reficar argues that its cost of capital claim is for costs it incurred in financing the improper payments CB&I was never entitled to receive²⁰⁴².

2056. As regards the PCS-related costs claim, Reficar argues that, while PCS activities were not included in CB&I's scope of work, CB&I was still contractually obligated to align its work and achievement of Mechanical Completion with Reficar's PCS activities²⁰⁴³.

b. Discussion

2057. Under New York law, two types of damages may generally be pled in contract cases²⁰⁴⁴:

- direct damages; and
- consequential damages.

2058. Direct damages are sought when the non-breaching party tries to recover the value of the very performance promised²⁰⁴⁵; on the other hand, consequential damages do not arise within the scope of the immediate inter-party transaction, but rather stem from losses incurred by the non-breaching party in its dealings, often with third parties²⁰⁴⁶.

2059. As a starting point, both Parties agree that a lost profit claim under New York law will normally be treated as a claim for consequential damages. The Tribunal concurs: in *Reynolds v. Behrman Brothers* the United States District Court of New York concluded that

“lost profits and similar damages that do not flow directly from the breach are ‘special’ or consequential damages”²⁰⁴⁷.

2060. According to Reficar, this general finding under New York Law has an exception: lost profit claims will be considered direct damages under New York law if

- the non-breaching party bargained for the right to claim these damages and
- if they are direct and immediate fruits of the contract.

Reficar's position is consistent with the findings in *Biotronik A.G. v. Conor Medystems Ireland*, in which the Appellate Division of the First Department of New York Supreme Court understood that²⁰⁴⁸:

²⁰⁴² CPHB, para. 444, ESOC, para. 751.

²⁰⁴³ CPHB, para. 403.

²⁰⁴⁴ RL-341, p. 6.

²⁰⁴⁵ RL-341, pp. 6-7.

²⁰⁴⁶ RL-341, pp. 6-7.

²⁰⁴⁷ RL-760, p. 5.

²⁰⁴⁸ RL-701, p. 4.

“Lost profits may be either general or consequential damages, depending on whether the non-breaching party bargained for such profits and they are the direct and immediate fruits of the contract”.

C. The Tribunal’s decision

2061. Thus, the Tribunal will apply these two criteria to Reficar’s claims for lost profits and cost of capital thereon (a.), and to the PCS-related costs claim (b.), to determine whether these claims are within the Tribunal’s power under the DRA.

a. Lost profits and cost of capital on lost profits

2062. Reficar brings three arguments to support its claim for lost profits and costs of capital on the lost profits:

2063. First, Reficar argues that the expected profits were in the contemplation of the Parties based “on the extensive discussion” of the internal rate of return prior to the execution of the EPC Contract²⁰⁴⁹.

2064. The Tribunal is not convinced by Reficar’s arguments.

2065. To buttress this assertion, Reficar points to the Execution Masterplan²⁰⁵⁰. The only reference to the internal rate of return is the following:

1.5 – Critical Issues

- Timely completion 2010 MC LS project to support Colombia environmental and Ecopetrol agreement requirements
- Timely finish 2011 MC of the rest of the project to meet Ecopetrol agreement support.
- Availability of local skilled craft labor
- Timely permit submission/approval to complete project on time (new jetty, fresh water concession, environmental, etc.)
- Project CAPEX to meet 15% of IRR. A CAPEX of 24 billion dollars was estimated (Class 5) which did not include several critical items.

2066. This reference does not show that the Parties had an extensive discussion on the expected profits of the Project; rather, it shows that, as any diligent owner would do, Reficar and Ecopetrol, prior to the Project, estimated the capital expenditure and the internal rate of return.

2067. Even assuming, *arguendo*, that this reference could serve as evidence of the Parties’ discussion on the expected profits, Reficar’s argument still fails: after these discussions occurred, Reficar agreed to exclude lost profits out of the sphere of the Parties’ remedial rights; the EPC Contract expressly provides that neither Party was to be found liable for “loss of profit”²⁰⁵¹.

2068. Thus, Reficar’s arguments show the opposite of what it claims: although Reficar was aware of the expected internal rate of return, it still agreed to exclude lost profit claims from the EPC Contract. In doing so, Reficar agreed to exclude from the Tribunal’s powers the right of awarding lost profits.

²⁰⁴⁹ ESOC, para. 782, fn. 1774.

²⁰⁵⁰ Ex. C-0024, pdf p. 12.

²⁰⁵¹ TC. 8.2.1, JX-002, p. 181; JX-004, p. 167.

2069. Second, Reficar argues that the lost profits and cost of capital claims are direct fruits of the contracts, and it has relied on the Kenrich Group [“KG”] Expert Report to back up this position:

- For lost profits, it is Reficar’s position that CB&I’s breach prevented the completion of the Work by the Mechanical Completion Date, resulting in lost profits that Reficar could have obtained if the Refinery had been operative²⁰⁵².
- For cost of capital, the KG Report sets forth that Reficar additionally lost the potential gains it would have obtained by investing the profits back²⁰⁵³.

2070. The applicable standard, to determine whether a damage derives directly from the contract, may be derived from *First Niagara Bank*²⁰⁵⁴: damages sought must intend to recover “the value of the very performance promised”. But Reficar’s claims for damages do not encompass the value of the performance that was breached, but rather represent eventual losses arising out of contracts that Reficar could have executed with third parties to maximize its revenue:

- The lost profits claim is linked to an uncertain amount of profits that Reficar could have obtained from third parties outside of the EPC Contract, had the Refinery been operational;
- The cost of capital claim on the lost profits even goes a step further: it is a speculative gain Reficar could have obtained by investing the profits previously obtained.

b. PCS-related costs claim

2071. The EPC Contract sets forth that Reficar (not CB&I) was responsible for the PCS Works, *i.e.*, the Works necessary for the pre-commissioning and start-up of the Refinery²⁰⁵⁵. PCS-related activities were outside of CB&I’s scope of work, except for the correction of defects²⁰⁵⁶. The necessary consequence is that the Parties cannot have bargained for Reficar’s right to claim damages from CB&I for obligations under Reficar’s own and exclusive responsibility and that PCS-related cost claims must be considered to be for indirect damages.

2072. In fact, there is a contradiction in Reficar’s position: it denies that PCS-related costs are indirect damages, while it accepts that a portion thereof, the PCS delay costs²⁰⁵⁷ and other time-related PCS costs, do indeed constitute indirect damages²⁰⁵⁸.

²⁰⁵² CPHB, para. 157.

²⁰⁵³ Kenrich Group ER, para. 5.1.

²⁰⁵⁴ RL-241.

²⁰⁵⁵ Section III, Appendix I, Schedule I, para. 1.6 of the EPC Agreement, JX-006, p. 585: “Pre-commissioning, Commissioning, Start-Up, Reliability & Performance Testing is [Reficar’s] responsibility with Contractor full assistance to the owner satisfaction”.

²⁰⁵⁶ CPHB, para. 403.

²⁰⁵⁷ CPHB, para. 404, see for “Cost of Delays to PCS Work” category: “This amount is based on a calculation of indirect damages that occurred during the PCS phase as a result of CB&I’s failure to turn over the systems and Units per the agreed schedule and sequence” [Emphasis added].

²⁰⁵⁸ LI ER, para. 278.

2073. Reficar also claims the PCS contractors' loss of labour productivity and "additional impacts" to these contractors. These claims also give rise to indirect damages:

- Under the standard derived from *Fist Niagara Bank*²⁰⁵⁹, damages caused by a decrease in the productivity of Reficar's PCS contractors do not encompass the value of the performance that was breached, but rather constitute indirect damages associated to contracts that Reficar had in place with third parties;
- The same is true for any "additional impacts" category: the additional impacts on the contractors also fail the test under *First Niagara Bank*.

2074. There is, however, one exception: Reficar paid certain amounts to its PCS contractors to correct defects in CB&I's Works and is now claiming reimbursement of these amounts from CB&I. This claim does not constitute indirect damages because in this case CB&I was under the Contract obligated to make-good the defective Work and refused to do so. The Tribunal has already (see Section VII.2.4 *supra*) decided this claim in Reficar's favour.

2075. Summing up, with the exception mentioned in the preceding paragraph, the Tribunal concludes that it has no power to grant damages related to PCS costs, because these damages fall within the indirect damage category.

* * *

2076. In light of the above, the Tribunal finds that Reficar's claims for lost profits, cost of capital on lost profits and indirect PCS-related costs seek relief for indirect or consequential damages, which the Tribunal has no authority to grant. Therefore, in accordance with Section 4.13 of the DRA, the Tribunal decides to dismiss these claims as it "neither ha[s] nor exercise[s] any power [...] to award special, indirect, consequential or punitive damages".

²⁰⁵⁹ RL-241.

VIII. QUANTUM

2077. The Tribunal will now analyse the quantum of damages to be awarded under the Claim and Counterclaim. Although the analysis of merits is inherently intertwined with the extent of damages (and hence, the Tribunal has reached preliminary conclusions with regard to quantum in the preceding Section), the Tribunal must still address a number of outstanding issues.

2078. The Tribunal has established the total monetary liability of CB&I towards Reficar at the amount of USD 1,008.41 million²⁰⁶⁰, which comprises:

- USD 845.4 million due to the breach of the Cost Control Commitments²⁰⁶¹,
- USD 152.75 million due to the breach of the Schedule Control Commitments²⁰⁶², and
- USD 10.3 million due to the breach of CB&I's obligation to provide the Works free of defects²⁰⁶³.

2079. The Tribunal has applied the Bottom-Up Total Modified Cost methodology to the breach of the Cost Control Commitments, and the use of this methodology by its very nature creates causality between the breach and the compensation, calculated as the difference between the Reasonable Cost Benchmark and the final EPC costs incurred by Reficar.

2080. For the damages awarded for CB&I's breach of the Schedule Control Commitments, causality has also been established through apportioning the days of delay for which CB&I is solely responsible.

2081. The Work Completion costs were also caused by CB&I: it breached the Contract when it declined to perform the corrective works and, as a consequence, Reficar may now claim the amounts it paid to its PCS contractors for the corrective works.

2082. According to CB&I, compensation is capped at USD 87.75 million, as a consequence of the liability cap set forth in TC 8.1.1; Reficar contests this allegation. Thus, the Tribunal must determine if the limitation of liability applies to the amounts previously calculated as damages for CB&I's breaches (VIII.1). Thereafter the Tribunal will address the set-off of reciprocal credits adjudicated in the present Award, the liquidation of the EPC Contract and the joint and several responsibility of the CB&I Respondents (VIII.2). Finally, the Tribunal will determine the applicable interest (VIII.3).

²⁰⁶⁰ 845.4 + 152.75 + 10.3 = 1,008.41 (million, USD).

²⁰⁶¹ See para. 1354 *supra*.

²⁰⁶² See para. 1725 *supra*.

²⁰⁶³ See para. 1845 *supra*.

VIII.1. LIABILITY CAP

2083. Both the Onshore and Offshore Contracts specify a Liability Cap, as well as six categories of liability which fall outside of its scope²⁰⁶⁴:

“8.1.1 The total aggregate liability of the Contractor to the Owner under or in connection with this Agreement [...] not exceed seventy million Dollars (US\$70,000,000.00) provided that the following liabilities (whether agreed or determined pursuant to TC46) shall not be taken into account in assessing whether the total aggregate liability (or any liability sub cap referred to in TC15.1.2, 54.8.3, 56.3.1 or 71.17) has been reached:

(i) liability under any indemnity under this Agreement;

(ii) liability for any insurance deductibles to be paid by the Contractor hereunder;

(iii) liability arising from any fraud, Gross Negligence or Willful Misconduct committed by the Contractor;

(iv) liability arising for a failure by the Contractor to comply with TC14.1 [failure to comply with local law];

(v) liability for any default interest which accrues due to the late payment by the Contractor of any amount provided for under this Agreement; and

(vi) any amounts paid to the Owner under the Advance Payment Letter of Credit or any repayment made to the Owner of any advance payment made by the Owner to the Contractor” [Emphasis added].

[For the Onshore Contract, Spanish is the language governing its interpretation²⁰⁶⁵. In Spanish, (iii) reads as follows:

“(iii) *responsabilidad derivada de cualquier fraude, Culpa Grave o Dolo incurridos por el Contratista*”²⁰⁶⁶.]

2084. There is an ancillary point which the Tribunal can dispose of summarily: CB&I argues that Reficar’s request to draw down on the Advance Payment LoC exceeds the Liability Cap²⁰⁶⁷, but section (vi) above clearly states that the Advance Payment LoC is not subject to the Liability Cap.

2085. The only truly relevant category of amounts that fall outside of the scope of the Liability Cap in the current case concerns section (iii), *i.e.*, liability arising from fraude/fraud, culpa grave/gross negligence or dolo/willful misconduct.

²⁰⁶⁴ TC 8.1.1, JX-002, pp. 180-181; JX-004, p. 166.

²⁰⁶⁵ See TC 1.3; JX-002, p. 173.

²⁰⁶⁶ JX-002, p. 51.

²⁰⁶⁷ ESOC, para. 384.

2086. CB&I argues that the Tribunal cannot award more than limitation of liability provisions under the EPC Contract permit²⁰⁶⁸. Reficar submits the contrary: the liability cap is irrelevant, because CB&I acted with *culpa grave*/gross negligence (or subsidiarily with *dolo*/willful misconduct)²⁰⁶⁹.

2087. The Tribunal will first address the Parties' positions (1.) and then make a determination (2.).

1. THE PARTIES' POSITIONS

2088. The Parties make extensive arguments on whether the liability cap finds application to any damages awarded by the Tribunal; the key dispute concerns whether CB&I breached its Cost and Schedule Control Commitments with *culpa grave* or *dolo*.

1.1. REFICAR'S POSITION

2089. Reficar argues that the liability cap does not apply to any damages awarded by the Tribunal.

2090. First, CB&I acted with *culpa grave*²⁰⁷⁰.

2091. Reficar says that *culpa grave* requires the showing that a party failed to perform an obligation with the level of diligence or care that even a negligent or careless person would exhibit in his or her own business²⁰⁷¹, which is precisely what CB&I did: it should have treated the Project as if it were a lump sum where the contractor's own finances were at risk and yet it allowed for cost overruns in the range of USD 2 billion on top of a +/-5% accuracy representation as to the Project costs²⁰⁷².

2092. Reficar also argues that CB&I was motivated by the desire to make additional profits at the expense of Reficar through rate arbitrage²⁰⁷³ and through windfalls it gained from its failures in the areas of engineering, modularization, and labour relations²⁰⁷⁴.

2093. Second, the liability cap also finds no application to any damages awarded by the Tribunal because CB&I breached its obligations with contractual *dolo*²⁰⁷⁵.

2094. As regards the applicable standard, Reficar first makes a reference to Art. 63 of the CCC, defining *dolo* as the positive intent to cause harm – a definition specifically referenced by the EPC Contract²⁰⁷⁶.

2095. Reficar argues, however, that Colombian courts do not interpret this provision literally and that instead, the key element of *dolo* is not "intent" but the deliberate

²⁰⁶⁸ RPHB, para. 491; ESOD, paras. 15, 1333-1335.

²⁰⁶⁹ CPHB, paras. 21, 121-122, 426-433,

²⁰⁷⁰ CPHB, paras. 195-200.

²⁰⁷¹ H-041, p. 117.

²⁰⁷² CPHB, paras. 13, 198, 319, Reply, para. 166.

²⁰⁷³ CPHB, paras. 14-20.

²⁰⁷⁴ CPHB, para. 154.

²⁰⁷⁵ ESOC, paras. 786, 810.

²⁰⁷⁶ ESOC, para. 791.

or conscious breach of a party's contractual obligations²⁰⁷⁷. Reficar avers that this interpretation has prevailed since a seminal decision by the Colombian Supreme Court in 1949²⁰⁷⁸ and has also been applied by arbitral tribunals deciding on the basis of Colombian law²⁰⁷⁹.

1.2. CB&I'S POSITION

2096. According to CB&I, the liability limitations in the Contract limit any damages to be awarded by the Tribunal to the amounts set under TC 8.1, with none of the potential exceptions listed in the Contract finding application.

2097. First, CB&I argues that *culpa grave* requires the meeting of a very high standard, which can only be found in "exceptionally rare circumstances"²⁰⁸⁰.

2098. According to CB&I, Reficar is not bringing a case for design errors or construction defects, both of which would be indicative of *culpa grave*²⁰⁸¹. An example is a case in which a contractor installed piping designed for fire-hose water instead of piping designed for drinking water, resulting in contaminated water in the building it was constructing²⁰⁸². This is not comparable with the current arbitration, in which Reficar obtained a world-class Refinery²⁰⁸³.

2099. CB&I also avers that a finding of *culpa grave* can only be made with regard to specific breaches, rather than with regard to the general contractual performance of a party²⁰⁸⁴ and that Reficar has failed to meet its burden of proof in this regard.

2100. In any event, Reficar's claims about CB&I's alleged mismanagement of cost and schedule controls lack merit because Reficar performed extensive audits of CB&I's costs and was regularly informed of construction progress²⁰⁸⁵.

2101. As regards any alleged illicit profit motive, CB&I did not obtain excessive additional profits from the Project; in fact, its Fixed Fee only increased by approximately USD 10.5 million²⁰⁸⁶.

2102. Second, CB&I also argues that Reficar has failed to prove that CB&I acted with contractual *dolo*²⁰⁸⁷.

²⁰⁷⁷ Reply, para. 196, citing to CL-0078, pp. 17-18; CL-0090, p. 23; CL-0081, p. 329; CL0065, p. 92; ESOC, paras. 792-796, citing to CL-0065, p. 92; CL-0103, p. 253 (pdf p. 3) and Solarte ER, para. 109 and fn. 60.

²⁰⁷⁸ ESOC, para. 791, citing to CL-0063.

²⁰⁷⁹ ESOC, paras. 792-795.

²⁰⁸⁰ RPHB, paras. 511-512; ESOD, para. 1456.

²⁰⁸¹ RPHB, para. 16.

²⁰⁸² ESOD, para. 1456, citing to RL-144, at pp. 58-60.

²⁰⁸³ RPHB, paras. 1-8, 578.

²⁰⁸⁴ RPHB, paras. 491, 509; ESOD, para. 1457.

²⁰⁸⁵ RPHB, paras. 18-19,

²⁰⁸⁶ ESOD, para. 19.

²⁰⁸⁷ ESOD, para. 1336.

2103. CB&I emphasizes the literal meaning of the Art 63 of the CCC, which states that *dolo* refers to the positive intent to cause damage to another or their property²⁰⁸⁸ – and says that Reficar has failed to prove such intent on CB&I’s part.

2104. According to CB&I, the intent to cause harm must be established to make a finding of *dolo*; otherwise, the concepts of *culpa grave* and *dolo* would become indistinguishable²⁰⁸⁹.

2. DISCUSSION

2105. Having summarised the Parties’ positions, the Tribunal will now analyse the EPC Contract provisions that limit the Contractor’s liability (2.1), and the concept of *culpa grave* under Colombian law (2.2); on the basis of this analysis, the Tribunal will apply its criteria for *culpa grave* under Colombian law to the facts of the case (2.3) and conclude that CB&I breached its cost and schedule control obligations with *culpa grave* (2.4). The Tribunal has previously found²⁰⁹⁰ that Reficar’s claims may be brought under either the Onshore or the Offshore Contract; since Reficar focuses its claims on the Onshore Contract, the Tribunal will analyse the limitations of liability under this Contract, which is subject to Colombian law, first and foremost. In any event, the result will be the same under the law of New York (2.5).

2.1. CONTRACT TERMS

2106. The Tribunal will first analyse the provisions limiting the Contractor’s liability²⁰⁹¹ under the Contract (A.) and then the exclusions to these limitations (B.).

A. Liability Cap provisions

2107. The EPC Contract provides for limitations of liability in different areas. But the only relevant ones are the following two [**“Liability Caps”**]:

- USD 70 million under TC 8.1²⁰⁹²;

“8.1.1 The total aggregate liability of the Contractor to the Owner under or in connection with this Agreement (which includes, but is not limited to, (a) liability for Contractor default, (b) liability for Defects, (c) Delay Liquidated Damages payable under TC54.8 (other than those payable under TC54.8.1(i)), (d) Performance Liquidated Damages payable under TC56.2 and subject to the amount set forth in TC56.3.1, and I the Contractor’s obligations to reperform any services or make good any deficient Work under TC71), will not exceed seventy million Dollars (US\$70,000,000.00) [...]” [Emphasis added];

²⁰⁸⁸ ESOD, para. 1398, citing to Art. 66 of CCC.

²⁰⁸⁹ ESOD, para. 1537, citing to Arrubla Second ER, paras. 48-59.

²⁰⁹⁰ See Section IV on the Law applicable to the dispute.

²⁰⁹¹ The Tribunal notes that a separate Liability Cap applies to any liability owed to the Contractor by the Owner; however, Reficar does not invoke these provisions in its defense to the Counterclaim.

²⁰⁹² JX-002, pp. 180-181; JX-004, p. 166. The Tribunal notes that a separate cap for just Delay Liquidated Damages was set at USD 45.75 million under TC 54.8.1(ii) but since this number is lower than the overall liability cap and since Reficar does not limit its claims to Delay Liquidated Damages, the Tribunal does not analyse this liability cap in detail.

- USD 15.75 million for delay of 60 days in the Mechanical Completion of the Project under TC 54.8.1(i)²⁰⁹³;

“54.8 Delay Liquidated Damages

54.8.1 Subject to TC54.8.1A, if the Contractor fails to achieve Mechanical Completion of all of the Units by the Guaranteed Completion Date, the Contractor shall be liable to pay Delay Liquidated Damages for each Day from the Day immediately following the Guaranteed Completion Date up to and including the date Mechanical Completion of all of the Units is achieved, at the following rates per Day:

(i) at the rate of two hundred and sixty two thousand five hundred Dollars (US\$262,500) per Day for the first 60 (sixty) Days of such delay [...]

54.8.2 Any amount payable pursuant to TC54.8.1(i) shall not count towards the Contractor’s aggregate limit on liability set out in TC8.1.1.” [Emphasis added]

B. Liability Cap exclusions

2108. Both the Onshore and Offshore Contract specify six categories of liability under TC 8.1 which fall outside of the scope of the Liability Caps²⁰⁹⁴:

“8.1.1 The total aggregate liability of the Contractor to the Owner under or in connection with this Agreement [...] will not exceed seventy million Dollars (US\$70,000,000.00) provided that the following liabilities (whether agreed or determined pursuant to TC46) shall not be taken into account in assessing whether the total aggregate liability (or any liability sub cap referred to in TC15.1.2, 54.8.3, 56.3.1 or 71.17) has been reached:

(i) liability under any indemnity under this Agreement;

(ii) liability for any insurance deductibles to be paid by the Contractor hereunder;

(iii) liability arising from any fraud, Gross Negligence or Willful Misconduct committed by the Contractor;

(iv) liability arising for a failure by the Contractor to comply with TC14.1 [failure to comply with local law];

(v) liability for any default interest which accrues due to the late payment by the Contractor of any amount provided for under this Agreement; and

(vi) any amounts paid to the Owner under the Advance Payment Letter of Credit or any repayment made to the Owner of any advance payment made by the Owner to the Contractor” [Emphasis added].

²⁰⁹³ JX-002, p. 226; JX-004, p. 203.

²⁰⁹⁴ JX-002, pp. 180-181; JX-004, p. 166.

[For the Onshore Contract, Spanish is the language governing its interpretation²⁰⁹⁵. In Spanish, (iii) reads as follows:

“(iii) *responsabilidad derivada de cualquier fraude, Culpa Grave o Dolo incurrido por el Contratista*”²⁰⁹⁶]

2109. Out of the scenarios above, the only relevant one in the current case concerns roman number (iii), *i.e.*, liability arising from *fraude/fraud, culpa grave/gross negligence or dolo/willful misconduct*.

[The Tribunal will not analyse the concept of fraud/*fraude*, because neither Party brings any claim or counterclaim on such basis; in any event, the term appears to be similar in nature to *dolo*²⁰⁹⁷.]

2110. The Tribunal must, then, establish whether CB&I breached its obligations with *culpa grave/gross negligence or dolo/willful misconduct*.

2111. In order to fully ascertain the meaning of the concepts enumerated as exceptions to the Liability Caps – *culpa grave*, gross negligence, *dolo* and willful misconduct – the Tribunal will revert to the definitions section of both the Onshore and Offshore Contract.

2112. The Onshore Contract provides that the terms “*Culpa Grave*”²⁰⁹⁸ and “*Dolo*”²⁰⁹⁹ have the meaning given to them under the CCC. The equivalent terms “Gross Negligence”²¹⁰⁰ and “Willful Misconduct”²¹⁰¹, in the English version, refer to the same provisions of Colombian law.

2113. “Willful Misconduct” is described in the English version of the Offshore Contract as “an intentional act or omission that the relevant Person knew or should have known was wrongful”²¹⁰². The equivalent term in Spanish is defined as “*Mala Conducta Intencional*” – a literal translation of “willful misconduct”. The term is followed by “(*Dolo*)” in parentheses, which means that the Offshore Agreement equates willful misconduct and *dolo*²¹⁰³. The terms “*Culpa grave*” and “Gross Negligence” are not defined in the Offshore Contract.

2114. In accordance with the provisions of the Onshore and Offshore Agreements, Colombian law will take precedence in the Tribunal’s analysis of *culpa grave/gross negligence* and *dolo/willful misconduct*: the Onshore Contract specifically references the CCC and, since the Offshore Contract does not define *culpa*

²⁰⁹⁵ See TC 1.3; JX-002, p. 173; JX-004, p. 159.

²⁰⁹⁶ JX-002, p. 51.

²⁰⁹⁷ Reficar only cursorily states that CB&I’s acts that amount to *dolo* would be equivalent to *fraude* but makes no separate arguments, see ESOC, paras. 789, 803-804, 809. The Tribunal notes that the concept of fraud/*fraude* was also not discussed in the Joint Expert Report on Colombian Law.

²⁰⁹⁸ JX-002, p. 31.

²⁰⁹⁹ JX-002, p. 32.

²¹⁰⁰ JX-002, p. 166.

²¹⁰¹ JX-002, p. 171.

²¹⁰² JX-004, p. 157.

²¹⁰³ JX-004, p. 34.

grave/gross negligence and equates willful misconduct with *dolo*, the Tribunal will interpret both legal concepts under Colombian law.

2115. In addition, CB&I has acknowledged that a finding under either Colombian or New York law is sufficient to disarm the Liability Caps with regard to each claim²¹⁰⁴:

“Reficar cannot recover damages in excess of USD 85.75 million, unless it can establish that each component of its claimed damages arises from fraud, gross negligence, or willful misconduct under New York law or the equivalent Colombian law principles of fraude, culpa grave, and dolo” [Emphasis added].

2116. In any event, the Tribunal’s conclusions will be affirmed under New York law.

2.2. ENFORCEABILITY OF THE LIABILITY CAPS

2117. The Parties argue whether the Liability Caps provisions under the EPC Contract are binding and enforceable.

A. The Parties’ positions

2118. Reficar avers that the Liability Caps find no application under Colombian law and is void because it is derisory²¹⁰⁵, abusive²¹⁰⁶, or unenforceable as it concerns an essential obligation under the Contract²¹⁰⁷.

2119. The result under New York is no different: the Liability Caps are also unenforceable because it is unconscionable²¹⁰⁸, and attempts to limit liability for intentional wrongdoing and duress²¹⁰⁹.

2120. CB&I argues that Reficar exercised its freedom of contract, recognized both under Colombian and New York law, when it agreed to the Liability Caps²¹¹⁰. Both legal systems limit the freedom to contract if it contravenes statutory law or public policy – neither of which is the case with the EPC Contract²¹¹¹.

2121. According to CB&I, the Liability Caps were duly negotiated by two sophisticated parties and should be enforced by the Tribunal despite the fact that Reficar now finds this provision to be disadvantageous to its position²¹¹².

B. Tribunal’s decision

2122. Reficar argues that the Liability Caps cannot be applied under Colombian and New York law due to its derisory or abusive nature and CB&I avers that it is a perfectly enforceable provision negotiated by two sophisticated parties.

²¹⁰⁴ RPHB, para. 491.

²¹⁰⁵ ESOC, paras. 755-759.

²¹⁰⁶ ESOC, paras. 760-762.

²¹⁰⁷ ESOC, paras. 763-765.

²¹⁰⁸ ESOC, paras. 770-772.

²¹⁰⁹ ESOC, paras. 773-774.

²¹¹⁰ ESOD, paras. 1487-1489.

²¹¹¹ ESOD, paras. 1491-1498.

²¹¹² ESOD, para. 1490.

2123. The Tribunal sides with CB&I.

2124. Both Parties agree that the CCC recognises the right of the contracting parties to modify the general rules on liability through consensual agreement by limiting or excluding certain types of liability²¹¹³. New York courts have also unequivocally established that the limitations of liability agreed by two sophisticated Parties are in general enforceable²¹¹⁴.

2125. A liability cap, like any provision, would not be enforceable if it attempted to impose restrictions that are forbidden by statutory law or public policy. The clearest example of such an unenforceable liability limitation provision would be one for liability arising from *culpa grave*/gross negligence or *dolo*/willful misconduct²¹¹⁵. But these circumstances have been expressly included as exceptions to the Liability Caps under TC 8.1²¹¹⁶. Reficar's argument as to the alleged exclusion of liability arising from intentional wrongdoing is, thus, moot.

2126. The Tribunal is likewise unconvinced by Reficar's arguments that the character of TC 8.1. is derisory, abusive, unconscionable or coercive.

2127. The concepts invoked by Reficar are predominantly applicable in consumer contracts, where one party has a clear advantage or a higher bargaining power than the other. In the present case, Reficar is an expert in the business of running oil refineries, and as such cannot avail itself of protection invoking consumer laws; furthermore, it was advised by a professional law firm and a multitude of external advisors, equalising any imbalances in the position of knowledge.

2128. Finally, the existence of contractual limitations to the parties' liabilities is a typical mechanism in construction contracts. In fact, Reficar fails to mention that the limitation was negotiated not only for CB&I's liability towards Reficar, but also for Reficar's liability to CB&I, with the same list of exceptions to its application²¹¹⁷.

2129. There is, thus, no evidence on the supposed derisory, abusive, unconscionable or coercive character of the Liability Caps provisions.

²¹¹³ RPHB, para. 493; ESOC, para. 786.

²¹¹⁴ See e.g., RL-748, para. 352 at pdf p. 6: "It is well settled that courts must honor contractual provisions that limit liability or damages because those provisions represent the parties' agreement on the allocation of the risk of economic loss in certain eventualities"; RL-751, paras. 266 at pdf p. 2: "A clause which exculpates a contractee from liability to a contractor for damages resulting from delays in the performance of the latter's work is valid and enforceable and is not contrary to public policy if the clause and the contract of which it is a part satisfy the requirements for the validity of contracts generally".

²¹¹⁵ For Colombian law, see Solarte ER, para. 109: "*dolo* and *culpa grave* limit the validity of clauses that restrict liability in the sense that an agreement by the parties regarding the scope of the obligation to pay damages cannot go so far as to release the debtor for intentional breaches or breaches arising from *culpa grave*"; for New York law, see e.g., *Abacus Fed. Savings Bank v. ADT Sec. Srvs., Inc.*, 967 N.E.2d 666, 669 (N.Y. 2012): "However, it is New York's public policy that a party cannot 'insulate itself from damages caused by grossly negligent conduct' and *Red Sea Tankers Ltd. v. Papachristidis (The Ardent)* [1997] 2 Lloyd's Rep. 548 (11): 'the fact that New York law would not recognize the validity of any exclusion of gross negligence supported that conclusion'".

²¹¹⁶ In the case of TC 54.8.3, the provision specifically states that the limitation of the Contractor's liability for Delay Liquidated Damages is "[s]ubject to TC8.1.1]", which includes the exceptions for *culpa grave*/gross negligence and *dolo*/willful misconduct.

²¹¹⁷ TC 8.4, JX-002, p. 182; JX-004, p. 168.

2.3. CULPA GRAVE UNDER COLOMBIAN LAW

2130. The Tribunal will now analyse the concept of *culpa grave*, beginning with the legal definition (A.); the Tribunal will then determine who bears the burden of proof when allegations of *culpa grave* are made (B.), look at different possible criteria for establishing *culpa grave* (C.) and finally scrutinise relevant Colombian case law (D.).

A. Legal definition

2131. *Culpa*, in English negligence or fault, is regulated under Art. 63 of the CCC²¹¹⁸:

“Artículo 63. <CULPA Y DOLO>. La ley distingue tres especies de culpa o descuido.

Culpa grave, negligencia grave, culpa lata, es la que consiste en no manejar los negocios ajenos con aquel cuidado que aun las personas negligentes o de poca prudencia suelen emplear en sus negocios propios. Esta culpa en materias civiles equivale al dolo.

Culpa leve, descuido leve, descuido ligero, es la falta de aquella diligencia y cuidado que los hombres emplean ordinariamente en sus negocios propios. Culpa o descuido, sin otra calificación, significa culpa o descuido leve. Esta especie de culpa se opone a la diligencia o cuidado ordinario o mediano.

El que debe administrar un negocio como un buen padre de familia, es responsable de esta especie de culpa.

Culpa o descuido levisimo es la falta de aquella esmerada diligencia que un hombre juicioso emplea en la administración de sus negocios importantes. Esta especie de culpa se opone a la suma diligencia o cuidado” [Emphasis added].

2132. Colombian law thus differentiates between three levels of negligence – *culpa grave*, *culpa leve* and *culpa levisima*. *Culpa grave* is defined as

²¹¹⁸ CL-13; English translation:

“Article 63. <FAULT [*CULPA*] AND *DOLO*>. The law distinguishes three kinds of fault [*culpa*] and lack of care.

Gross fault [*culpa grave*], gross negligence, *lata culpa*, is fault that consists of not managing others’ affairs with the care that even negligent or careless persons usually use in their own affairs. This fault in civil matters is equivalent to *dolo*.

Minor fault [*culpa leve*], minor lack of care, slight lack of care, is the absence of the diligence and care that men usually use in their own affairs. Fault or lack of care, without any other description, means ordinary fault or lack of care. This kind of fault is opposed to ordinary or average diligence or care.

A person who should administer a business as a good father of a family is responsible for this kind of fault. Very minor fault [*culpa levisima*] or lack of care is the absence of the careful diligence that a judicious man uses in the administration of his important affairs. This kind of fault is opposed to the highest degree of diligence or care.

Dolo consists of a positive intention to inflict injury on the person or property of another” [Tribunal’s clarifications in parentheses].

“no manejar los negocios ajenos con aquel cuidado que aun las personas negligentes o de poca prudencia suelen emplear en sus negocios propios”,

or “not managing others’ affairs with the care that even negligent or careless persons usually use in their own affairs”.

2133. The Parties’ experts agree that an obligor acts with *culpa grave*²¹¹⁹

- If his/her conduct shows a significant lack of consideration of the creditor’s interest in the performance of the contract, or
- If the obligor fails to manage the creditor’s business with the level of care that even negligent or imprudent people usually employ in the management of their own business.

2134. Reficar’s expert, Prof. Solarte, uses similar terms: *culpa grave* takes the form of serious breaches, with a failure to use the minimum care expected or with extreme negligence, that would not be committed by even the most careless person²¹²⁰ – a description with which Prof. Arrubla does not disagree. The only point made by CB&I’s expert is that the standard for *culpa grave* is very high and that findings of *culpa grave* by adjudicators are rare²¹²¹.

2135. The above standard is also confirmed by Colombian scholars:

- Prof. Cubides Camacho states that
*“culpa grave [...] consiste en una negligencia extrema que no cometen ni aun las personas más descuidadas”*²¹²²;
[culpa grave [...]] is extreme negligence that not even the most careless people commit²¹²³],
- Prof. Velásquez Gómez has classified *culpa grave* as “*muy torpe*”²¹²⁴ or “very clumsy” conduct²¹²⁵.

2136. In sum, *culpa grave* under Colombian law may be seen as reckless disregard of the interests of the counterparty, made visible through breaches that even a negligent or imprudent person would not have undertaken in the management of their own business.

B. Burden of proof

2137. Art. 1604 of the CCC provides²¹²⁶:

²¹¹⁹ JER 8 on Colombian Law, Issue 81, pdf pp. 60-62.

²¹²⁰ Solarte Rebuttal ER, para. 85.

²¹²¹ JER 8 on Colombian Law, Issue 83, Prof. Arrubla’s Comments, pdf p. 63.

²¹²² CL-0469, p. 272 (pdf p. 3).

²¹²³ English translation taken from Solarte Rebuttal ER, fn. 84 at pdf p. 30.

²¹²⁴ CL-0201, p. 687 (pdf p. 2).

²¹²⁵ CL-0201, p. 687 (pdf p. 4).

²¹²⁶ RL-320, English translation: “[...] The burden of proof is assigned to the party who wishes to employ it; proof of a fortuitous case to the party who alleges it”.

“ARTICULO 1604. <RESPONSABILIDAD DEL DEUDOR>.

[...] *La prueba de la diligencia o cuidado incumbe al que ha debido emplearlo; la prueba del caso fortuito al que lo alega*”.

2138. As the Tribunal has already established in para. 1027 *supra*, under Colombian law in contractual relations there is a presumption of *culpa*: it rests on the defendant to prove that he/she applied the requisite standard of care. When a person enters into a contract, he/she is bound to act diligently and the burden of proving that this threshold has been met, falls upon his/her shoulders; negligence is presumed, unless the person who should have used diligence or care proves otherwise. As explained by a Prof. Castro de Cifuentes²¹²⁷,

“Es decir, en principio se presume su culpa, admitiéndose evidentemente la prueba en contrario para desvirtuar tal presunción”.

2139. The same is stated by Prof. Cubides Camacho²¹²⁸:

“En materia civil, tratándose de responsabilidad contractual, el artículo 1604 del Código, al prever que “la prueba de la diligencia o cuidado incumbe al que ha debido emplearlo” establece una especie de presunción de culpa y dispone para desvirtuarla la probanza de la diligencia debida”.

2140. Prof. Cubides Camacho continues, however, in explaining that the presumption does not apply whenever an accusation is made of *culpa grave*²¹²⁹:

“Desde luego, por virtud de la equiparación de la culpa grave y el dolo, aquella debe probarse como este, inclusive en los eventos de responsabilidad contractual, en los cuales, a pesar de presumirse la culpa del incumplido y tener él la carga de la prueba de su diligencia y cuidado, si el contratante perjudicado con el incumplimiento endilga al incumplido una culpa grave, porque, por ejemplo, aspira a que se den los efectos propios del dolo, es obligado a probarla” [Emphasis added].

2141. For this reason, while CB&I was under the presumption of having been negligent in the performance of the EPC Contract, the burden of proving that CB&I breached its obligations under the EPC Contract with culpa grave lies with Reficar.

²¹²⁷ CL-0711, p. 8 (source p. 179); English translation:

“In other words, their fault is presumed in principle, obviously admitting evidence to the contrary to disprove the presumption”.

²¹²⁸ CL-0469, p. 273 (pdf p. 4). English translation (pdf p. 7):

“In civil matters, when it comes to contractual liability, Article 1604 of the Code, by providing that “the proof of diligence and duty of care lies with the one who has had to use it” it establishes a kind of presumption of negligence and stipulates in order to distort it, the evidence of due diligence”.

²¹²⁹ CL-0469, p. 274 (pdf p. 5). English translation (pdf p. 8):

“Of course, by virtue of equivalence of the gross negligence and *dolo*, it has to be proven as such, even in the event of contractual liability, in which, despite presuming the negligence of the individual in breach and having the burden of proof of his diligence and care, if the contracting party damaged by the breach foists a gross negligence on the individual in breach, because, for example, it pursues the effects inherent to *dolo*, it is obliged to prove it”.

C. Criteria for finding *culpa grave*

2142. There is no one-size-fits-all test under Colombian law that could in abstract solve all cases with allegations of *culpa grave*. To the contrary, as stated by Prof. Velásquez Gómez, a determination of *culpa grave* must be made on the basis of each factual scenario:

*“No toda persona se comporta de manera idéntica ante un mismo hecho, sin que, por lo tanto, se pueda dejar el lado la valoración de las circunstancias que lo rodean. En otros términos, el hecho no se puede aislar de su contorno, de la realidad”*²¹³⁰.

[“Not everybody behaves in the same way concerning one same fact, without, omitting an appraisal of surrounding circumstances. In other words, facts cannot be separated from their context – from reality”²¹³¹.]

2143. Prof. Velásquez Gómez also gives an illustrative example comparing the level of care that is required of an obligor depending on the item that is being cared for:

*“Nadie puede dudar que la conducta que desempeña el hombre no es la misma cuando se le exige cuidar un lápiz de poco valor, a cuando se le exige cuidar una joya de enorme valor. La experiencia muestra que el común de las gentes cuidará con mayor énfasis la joya que el lápiz”*²¹³².

[“No one can doubt that a man’s conduct is not the same when he is required to take care of a pencil of little value, as when he is required to take care of a jewel of enormous value. Experience shows that the average person will take more care of the jewel than the pencil”²¹³³.]

2144. Keeping in mind the above need to look closely at the facts when establishing the requisite standard of care, the Tribunal has full freedom to exercise its own judgment in weighing the evidence marshalled by the Parties and establishing whether the conduct of any of the parties complies or fails to comply with this standard. CB&I’s legal expert, Prof. Arrubla, accurately invokes the principle of logical and reasonable rules of evaluation under Colombian law, according to which the adjudicator is “completely free to form his or her own opinion on the probative merit that the means of proof offer”²¹³⁴.

2145. What criteria should the Tribunal then adopt to weigh the available evidence and to conclude whether CB&I breached its obligations with *culpa grave*?

2146. The Parties have offered a catalogue of available criteria (a.), which the Tribunal will contrast against the relevant case law (b.), to establish the applicable test (c.).

²¹³⁰ CL-0201, p. 703 (pdf p. 3).

²¹³¹ CL-0201, p. 703 (pdf p. 5).

²¹³² CL-0201, p. 703 (pdf p. 3).

²¹³³ CL-0201, p. 703 (pdf p. 5).

²¹³⁴ JER 8 on Colombian Law, Issue 84, comments by Prof. Arrubla, pdf p. 64.

a. The Parties' positions

2147. Reficar, supported by its legal expert, points to a number of factors that the Tribunal should take into account when assessing whether CB&I acted with *culpa grave*:

- the results of the performance: analysing cumulatively²¹³⁵ the difference between what the Parties had agreed to and the final result of the Contract²¹³⁶,
- the existence of multiple breaches²¹³⁷;
- referring to essential obligations²¹³⁸;
- the magnitude of the harm caused by such breaches²¹³⁹;
- the high value of the Project²¹⁴⁰ and of the interests involved²¹⁴¹;
- the foreseeability of harm, *i.e.*, CB&I's awareness of the risks involved in the Project and of the grave repercussions of a breach of its contractual obligations²¹⁴²;
- the failure to adopt measures to prevent clearly foreseeable harm²¹⁴³;
- impermissible behaviour by a professional obligor, taking into account his experience and sophistication²¹⁴⁴.

2148. CB&I's expert, Prof. Arrubla, accepts that the *culpa grave* assessment may be based on several criteria, but he takes issue with the suitability of the following three²¹⁴⁵:

- the existence of multiple breaches (i.),
- the magnitude of the harm (ii.),
- the type of obligation breached (whether it is an essential or non-essential one) (iii.).

2149. (i.) The Tribunal will not apply the criterion of multiple breaches, as it considers such criterion inapposite in the circumstances of the present case, and thus does not need to refute Prof. Arrubla's counterargument.

²¹³⁵ Reply, paras. 171-176, citing to CL-0368, paras. 764, 771, CL-0469, p. 272, CL-0369, p. 42.

²¹³⁶ Reply, paras. 185-189, citing to an analysis under French law under CL-0365, pp. 434-435 and the previously quoted arbitrations under Colombian law, CL-0799, p. 46 and CL-0075, p. 114 and Solarte Rebuttal ER, para. 88.

²¹³⁷ Solarte Rebuttal ER, para. 118.

²¹³⁸ Solarte Rebuttal ER, para. 118.

²¹³⁹ Solarte Rebuttal ER, para. 118.

²¹⁴⁰ Reply, para. 190, citing to Solarte Rebuttal ER, para. 87.

²¹⁴¹ Solarte Rebuttal ER, para. 118.

²¹⁴² Reply, para. 191, citing to CL-0075, p. 104 and CL-0800.

²¹⁴³ Solarte Rebuttal ER, para. 118.

²¹⁴⁴ Solarte Rebuttal ER, para. 118.

²¹⁴⁵ JER 8 on Colombian Law, Issue 84, Comments by Prof. Arrubla, pdf pp. 64-65.

2150.(ii.) As regards the magnitude of the harm, Prof. Arrubla, says that the existence and seriousness of the damage cannot be an element proving *culpa grave*, because the existence of the breach is independent of its magnitude and must be proven separately; otherwise, the Tribunal would follow the fallacy of “begging the question”²¹⁴⁶.

2151.The Tribunal disagrees.

2152.Proving the existence (and magnitude) of the damages is indeed a different requirement of civil liability, autonomous from *culpa grave*. The Tribunal does, however, believe that the extent of the damages can be helpful in assessing the obligor’s conduct and the seriousness of the breach.

2153.(iii.) Finally, as regards the nature of the breached obligation, Prof. Arrubla makes a valid point that both essential and non-essential obligations may be breached with different levels of *culpa*²¹⁴⁷; however, this does not mean that in establishing whether the obligor acted with *culpa grave*, the Tribunal should not take the nature of the breached obligation into consideration when assessing the seriousness of the obligor’s *culpa*.

* * *

2154.As both Parties agree, the Tribunal will use a multi-pronged test to establish whether Respondents acted with *culpa grave*. In order to determine the criteria relevant for the finding of *culpa grave* the Tribunal needs to contrast the Parties’ opinions with Colombian case law.

b. Case law

2155.Before analyzing these criteria for the existence of *culpa grave*, the Tribunal will briefly review Colombian case law on the matter, by first addressing seminal decisions by the Colombian Supreme Court of Justice [**“Colombian Supreme Court”**] (i.) and then arbitral rulings decided under Colombian law in construction disputes (ii.).

(i). Supreme Court of Justice

2156.The Parties and their legal experts have referenced only a limited number of disputes decided by Colombian courts.

2157.The seminal case concerns a 1958 Colombian Supreme Court ruling, in which the decision of the Superior Tribunal of Barranquilla was overturned, due to its erroneous interpretation of the concept of *culpa*, in a case where a Mr. Birbragher recklessly accused a Mr. Lara Nieto of theft²¹⁴⁸.

2158.The Colombian Supreme Court decision elaborates on the proper interpretation of *culpa* under Colombian law. It employs the terms “*culpa consciente*” or “conscious

²¹⁴⁶ JER 8 on Colombian Law, Issue 84, Comments by Prof. Arrubla, pdf p. 65.

²¹⁴⁷ JER 8 on Colombian Law, Issue 84, Comments by Prof. Arrubla, pdf p. 65.

²¹⁴⁸ CL-0800, p. 140 (pdf p. 6).

negligence” and “*culpa inconsciente*” or “unconscious negligence” and its findings are applicable to any scenario where *culpa*, including *culpa grave*, is contemplated.

- 2159.(i) *Culpa consciente*, qualified as “more serious” or “*más grave*”, concerns situations “[c]uando el autor conoce los daños que, pueden ocasionarse con un acto suyo pero confió imprudentemente en evitarlos”²¹⁴⁹.

[“When the agent knows the damages that can occur as a result of his acts but imprudently believes he can avoid them”²¹⁵⁰.]

- 2160.(ii) *Culpa inconsciente* occurs “[c]uando el autor no prevé el daño que pueda causarse con un acto suyo, pero hubiera podido preverlo, dado su desarrollo mental y conocimiento de los hechos”²¹⁵¹.

[“When an actor cannot foresee the type of damages that have been caused by his acts but could have nonetheless prevented [the harm which caused] them given [...] his knowledge of the facts”²¹⁵².]

2161. The Colombian Supreme Court used these two scenarios of *culpa* to establish that the applicable standard is objective rather than subjective:

*“la capacidad de prever no se relaciona con los conocimientos individuales de cada persona, sino con los conocimientos que son exigidos en el estado actual de la civilización para desempeñar determinados oficios o profesiones”*²¹⁵³.

[The capacity to foresee [the harm] is not related to the knowledge of each person but rather the knowledge which is required at the current stage of society to perform specific occupations or professions²¹⁵⁴.]

2162. The conclusion for the present case is that Reficar is not required to prove that CB&I acted with actual knowledge (or foresight) that its actions would breach the Contract; instead, Reficar must only prove that a sophisticated contractor such as CB&I would have foreseen that Respondents’ actions would breach the Contract.

Colombian Supreme Court ruling of 2014

2163. Another, more recent case decided by the highest court in Colombia discussed by the Parties, is a judgment delivered on July 31, 2014, in which the Colombian Supreme Court applied the following standard for gross negligence²¹⁵⁵:

²¹⁴⁹ CL-0800, p. 136 (pdf p. 4).

²¹⁵⁰ CL-0800, pdf p. 7.

²¹⁵¹ CL-0800, p. 136 (pdf p. 4).

²¹⁵² CL-0800, pdf p. 7.

²¹⁵³ CL-0800, p. 136 (pdf p. 4).

²¹⁵⁴ Translation by the Tribunal.

²¹⁵⁵ CL-0065, pp. 93-94, English translation by the Tribunal:

“In other words, from this perspective, *culpa grave* is evaluated according to a specific standard: ‘the average conduct of the common man [...] [T]he negligence or imprudence that gives rise to gross negligence must be [...] of a magnitude characterized by disproportion and notorious infrequency. It is not enough, then, that the acts in question be clearly careless; they must also be clearly exceptional in the environment in which the respective activity is carried out [...]’. It is with this orientation that authorized scholars have

“Esto es, que desde esa óptica la culpa grave se evalúa en función de una pauta concreta: ‘la conducta media del hombre común [...]. [L]a negligencia o la imprudencia que da lugar a la culpa grave deba revestir [...] una magnitud caracterizada por la desmesura y la notoria infrecuencia. No basta, pues, que se trate de actos de claro descuido, sino que, además, se requiere que tengan un carácter palmariamente excepcional en el medio en el que se desenvuelve la respectiva actividad [...]. Con esa orientación es que autorizados doctrinantes han precisado que la culpa grave comporta ‘una negligencia, imprudencia o impericia extremas, no prever o comprender lo que todos prevén o comprenden, omitir los cuidados más elementales, descuidar la diligencia más pueril, ignorar los conocimientos más comunes’”
[Emphasis added].

2164. The Tribunal observes that the above test refers to elements proposed by Prof. Solarte, such as the magnitude of the breach; the test also speaks of extreme imprudence, disregarding the most basic diligence, which is precisely the level of negligence identified by the Tribunal in the preceding analysis of Art 63 of the CCC.

[The test also speaks of “notorious infrequency” and “exceptional character” of the actions tainted by *culpa grave*; however, this criterion should be viewed as a qualifier of the degree of recklessness rather than the frequency with which decision-makers should make findings of *culpa grave*.]

(ii). Arbitral decisions

2165. The Tribunal understands that the Parties agree that for construction disputes in particular, arbitral decisions rendered by tribunals applying Colombian law offer sufficient persuasive value to assist the Tribunal in its analysis.

2166. The Parties have drawn the Tribunal’s attention to a number of such awards, in which arbitral tribunals applying Colombian law found *culpa grave*²¹⁵⁶. The Tribunal will focus on the main case used by each Party: *Consorcio Ferrovial SAINC v. Carbones del Cerrejón Limited* [*“Consorcio Ferrovial”*]²¹⁵⁷ cited to by Claimant and *Edificio Centro de Comercio Internacional v. INHISA S.A.* [*“Edificio Centro de Comercio Internacional”*]²¹⁵⁸ – by Respondent.

specified that *culpa grave* entails ‘extreme negligence, imprudence or inexperience, not foreseeing or understanding what everyone foresees or understands, omitting the most elementary care, neglecting the most puerile diligence, ignoring the most common knowledge’” [Emphasis added].

²¹⁵⁶ See e.g.:

CL-0079, p. 60 – with regard to the use of pipes that did not conform with the norms for transmitting potable water;

CL-0080, p. 22 – with regard to a transport company failing to adopt security measures that would have prevented the theft of the goods that were stolen *en route*;

CL-0368, paras. 774-782 – with regard to a construction consortium that presented a work plan that it knew beforehand it was incapable of meeting.

²¹⁵⁷ CL-0368.

²¹⁵⁸ RL-0144.

Consortio Ferrovia

2167. In this ICC case decided in July 2017, the underlying facts concerned a mining company contracting with a construction consortium to build an expansion to its infrastructure. At one point, the mining company terminated the contract, which led the consortium to initiate an arbitration. The consortium requested the payment of the costs of certain items it had constructed, stand-by costs, general expenses and demobilisation costs, among others. The owner brought a counterclaim, alleging serious breaches of schedule, failure to meet project milestones and abandonment of works, among others, all of which, in the owner's view, were committed with *culpa grave*.

2168. Due to the expansion project being a highly complex endeavour, involving significant costs, the tribunal set the requisite amount of care for the consortium as the highest standard of diligence:

“el estándar de diligencia [...] más alto: el que corresponde a un profesional altamente especializado en el trabajo que se le encomienda”²¹⁵⁹.

[“the one that corresponds to a highly specialized professional in the work that was commissioned to it”²¹⁶⁰].

2169. The majority of the tribunal sided with the mining company, and found that the consortium had indeed acted with *culpa grave*, because the results of its actions were simply unjustifiable:

“En síntesis, todo parecería indicar que, por razones que resultan difíciles de entender, el Contrato desbordó la capacidad de planeación, concepción, programación y ejecución del Consorcio. Es explicable que se hubiera presentado incumplimiento o demoras por circunstancias específicas respecto de ciertos ítems o aspectos del proyecto. Pero no resulta fácil entender o justificar un incumplimiento casi sistemático de todo el Contrato”²¹⁶¹.

[“In summary, everything would seem to indicate that, for reasons that are difficult to understand, the Contract went beyond the Consortium's ability to plan, foresee, schedule, and perform. It is understandable that there would be breaches or delays due to specific circumstances regarding certain items or aspects of the project. However, it is not easy to understand or justify an almost systematic breach of the entire Contract²¹⁶²”] [Emphasis added].

2170. Particular emphasis was placed by the tribunal on the fact that the consortium presented to the owner a work plan with, full knowledge that it was unachievable:

“En particular, cabe destacar que de la prueba en estas actuaciones ha quedado comprobado [...], que como ha sido alegado por Cerrejón, el Consorcio presentó fechas en su plan de trabajo relativas al suministro del Jack-Up que sabía de antemano no podía cumplir. Este proceder es al menos

²¹⁵⁹ CL-0368, para. 763, p. A204 (pdf pp. 209-210).

²¹⁶⁰ CL-0368, para. 763, p. A204 (pdf p. 258).

²¹⁶¹ CL-0368, para. 776, p. A212 (pdf p. 217).

²¹⁶² CL-0368, para. 776, p. A212 (pdf p. 266).

*gravemente culposo y posiblemente doloso, no solo por su entidad, sino además por su impacto negativo en el Camino Crítico atento a la utilización programada de los Jack-Ups en la realización de los trabajos por mar y su empleo efectivo para ejecutar los de tierra desde el mar*²¹⁶³.

[“In particular, it should be stressed that the evidence in these proceedings has proved [...] that, as claimed by Cerrejón, the Consortium submitted dates in its work plan regarding Jack-Up supply that it knew beforehand it could not meet. This way of acting is at the least grossly negligent and possibly fraudulent, not only because of its consequence, but also because of its adverse impact on the Critical Path, given the scheduled use of the Jack-Ups in carrying out marine work and their effective use in performing the land work from the sea”²¹⁶⁴] [Emphasis added].

2171. Other particular factors considered by the tribunal to be indicative of *culpa grave* included the fact that the consortium²¹⁶⁵:

- abandoned the works,
- presented a faulty risk matrix,
- failed to follow the repeated calls of the counterparty to comply with its contractual obligations,
- suspended the works as a result of a strike, and
- failed to deliver to the owner relevant information on the delivery date of certain materials or equipment.

2172. The Tribunal finds the award in *Consortio Ferrovial* particularly persuasive as it has been upheld by the Colombian Supreme Court after being brought to annulment proceedings by the consortium²¹⁶⁶.

Edificio Centro de Comercio Internacional

2173. Respondent in turn relies primarily on *Edificio Centro de Comercio Internacional*.

2174. The tribunal in *Edificio Centro de Comercio Internacional* established that the applicable standard for *culpa grave* is

*“la conducta que consiste en no manejar los negocios ajenos con aquel cuidado que, aun las personas negligentes o de poca prudencia, suelen emplear en sus negocios propios”*²¹⁶⁷,

²¹⁶³ CL-0368, para. 781, p. A213 (pdf p. 218).

²¹⁶⁴ CL-0368, para. 781, p. A213 (pdf p. 267).

²¹⁶⁵ CL-0368, para. 774, pp. A211-A212 (pdf pp. 216-217 and 266-267 for the translation).

²¹⁶⁶ CL-0369, p. 59: “Resuelve Primero. Declarar infundado el recurso de anulación del laudo internacional formulado por las sociedades SAINC INGENIEROS CONSTRUCTORES S.A. y FERROVIAL AGROMAN S.A.[...] frente al laudo arbitral de fecha 19 de julio de 2017 [...]”.

²¹⁶⁷ RL-0144, p. 59.

["conduct which consists in not managing the interests of others with the care that even negligent and imprudent persons apply in their own business"²¹⁶⁸],

thus reiterating the text of Art. 63 of the CCC.

2175. Applying this standard to the facts of the case, the tribunal found that a contractor acted with *culpa grave* when it installed fire-hose water piping instead of piping designed for drinking water²¹⁶⁹:

"Inhisa S.A.[...] NO empleo la debida diligencia y cuidado profesional que implica su condición profesional y el alcance que conllevan la obra de instalación de la nueva tubería para la conducción de agua potable [...]".

["Inhisa S.A. [...] DID NOT apply the required diligence and professional care implied by its professional status and the scope of work involved in the installation of the new drinking water pipeline [...]"²¹⁷⁰] [Capitals in the original].

2176. In finding *culpa grave*, the tribunal rather than explaining in detail why the applicable standard was met, stated that it was simply unexplainable for the contractor to have exhibited such an egregious level of carelessness:

*"No de otra manera se explica que – a pesar de esos factores que jugaban a su favor – en la ejecución de ese contrato, esa empresa hubiera incurrido en errores tan graves como instalar para la conducción de agua potable una tubería que, según los estándares reconocidos en la actividad de la ingeniería Hidráulica, no es apta para la conducción de ese líquido sino para conducir agua destinada a apagar incendios [...]"*²¹⁷¹.

[It cannot be explained otherwise that – despite these factors that played in its favour – in the execution of this contract, this company had committed such serious errors as installing a pipe for the conduction of drinking water that, according to the recognized standards in the activity of hydraulic engineering, is not apt for the conduction of this liquid but to carry water destined to extinguish fires [...]"²¹⁷².

2177. The Tribunal will apply the same reasoning when evaluating CB&I's conduct.

c. The applicable test

2178. Having analysed the opinions of both Parties' legal experts and the Colombian jurisprudence presented by the Parties, the Tribunal finds that in establishing *culpa grave*, the Tribunal must pay special attention to:

- The significance of the obligation that was breached;

²¹⁶⁸ Translation by the Tribunal.

²¹⁶⁹ RL-0144, p. 59.

²¹⁷⁰ Translation by the Tribunal.

²¹⁷¹ RL-0144, p. 59.

²¹⁷² Translation by the Tribunal.

- The magnitude of the damage caused by the breach;
- The attitude shown by the party in breach towards the foreseeable damage.

2179. If the obligation breached was essential, the magnitude of the damage caused was significant, and the attitude of the party in breach was reckless, the Tribunal will find that the requirements of the legal definition in the CCC of *culpa grave* have been met: “not [manage] others’ affairs with care that even negligent or imprudent people usually employ in the management of their own business”.

2.4. DETERMINATION OF *CULPA GRAVE*

2180. In the current Section, the Tribunal will apply the three-pronged test under Colombian law to the facts of the case and find that CB&I breached its cost and schedule control obligations with *culpa grave*.

A. Significance of the obligation breached

2181. The first criterion concerns the nature of the breached obligations: if these obligations were essential, *i.e.*, if significant interests were enshrined in them, then there is a higher likelihood that their breach amounted to *culpa grave*. If, however, the breach concerned an obligation of ancillary nature, *i.e.*, of minor interest, this could be indicative that the *culpa* did not qualify as *grave*.

2182. CB&I breached its Cost and Schedule Control Commitments. The question is, thus, whether the Cost and Schedule Control Commitments were essential obligations in the EPC Contract. The answer is in the affirmative: cost-related obligations are always essential to any construction contract, because the basic obligations assumed by the contractor is to construct at an agreed price (or reasonably within cost predictions) and within a fixed timeframe.

2183. But, even more so, in this case, where the Parties placed special importance on the Cost and Schedule Control Commitments:

2184. First, the material nature of the Cost and Schedule Control Commitments, for both Parties, is enhanced by the following facts:

- The Cost Control Commitments provided Reficar with the protection that assuaged its fears as to entering into a cost-reimbursable EPC Contract (which was CB&I’s preferred cost-modality, as it would shift the risk of cost overruns on Reficar), as opposed to a lump sum, where it would be CB&I running that risk;
- The Schedule Control Commitments were also essential for both Parties, with the clear obligation to reach Mechanical Completion of the Project by February 2013: finalizing the works within the agreed timeframe was a fundamental requirement for success and would earn CB&I a bonus, while the alternative scenario of delays would result in the accrual of liquidated damages and prolongation costs.

2185. Second, the Tribunal has previously established that the relationship between Reficar and CB&I was not that of a typical, arms-length construction contract.

2186. The Parties agreed that CB&I would be bound by a Heightened Diligence Obligation under para. 3 of the Project Execution Plan²¹⁷³:

“Even though a reimbursable contract CB&I project management will rigorously control cost and schedule similar to a lump sum contract safeguarding Reficar resources as if their own” [Emphasis added].

2187. CB&I agreed that its contractual role would not be that of a mere contractor; instead, CB&I accepted to become a contractor *cum* mandatory²¹⁷⁴, with the obligation to construct the Project and the right to be reimbursed by the Owner, but subject to a fiduciary obligation that all costs (and schedule) decisions taken must safeguard Reficar’s resources as if its own.

2188. The existence of this additional bond between the Parties speaks to a heightened level of legitimate trust that Reficar could and did place on CB&I’s representations as to the estimated Project costs and Mechanical Completion date – a trust that CB&I breached:

- When CB&I submitted the Representation Letter, it guaranteed, with a +/- 5% accuracy, that costs would amount to USD 4 billion, yet they ended up reaching USD 5.9 billion, with a large amount of the Excess Costs being foreseeable by the Cut-Off Date; in fact, the cost forecast from September to October 2012 alone rose by a staggering USD 1.25 billion, without any explanation by CB&I;
- Similarly, when Reficar expressed worries regarding a possible delay, CB&I assuaged its fears assuring that the Mechanical Completion date would not be altered; during the July 19, 2011 Reficar BofD meeting Mr. Deidehban was asked for certain explanations about the status of the Project²¹⁷⁵ and he explained that a critical unit was affected by a 2.4% delay, but “the guaranteed mechanical completion date should not be adjusted on the basis of the issue”²¹⁷⁶; yet, only six months later, CB&I’s projected date of Mechanical Completion was moved by more than half a year²¹⁷⁷ and, eventually, Mechanical Completion occurred with a delay of 725 days²¹⁷⁸.

2189. The Tribunal notes that in *Consortio Ferroviario*, analysed *supra*, another ICC tribunal deciding under Colombian law found that a contractor acted with *culpa grave* when it presented a work plan it was aware was unachievable. The abrupt changes in the schedule presented by CB&I suggest that CB&I, being aware of unavoidable delays, was prepared to knowingly submit unachievably optimistic predictions.

²¹⁷³ JX-002, p. 654; JX-004, p. 628.

²¹⁷⁴ See Section VII.2.1.3.1.1 *supra*.

²¹⁷⁵ Ex. C-0429, p. 5.

²¹⁷⁶ Ex. C-0429, p. 5.

²¹⁷⁷ Ex. C-0088, p. 4: “The late deliveries of Substations, Isometric Production, Pipe Fabrication, and Tank Farm Modifications have pushed the Mechanical Completion of the Project to 19 September 2013”. The Tribunal notes that the 203 days are imputable to Reficar. Still, CB&I had a duty to keep Reficar updated on any projected delays to the Project Schedule.

²¹⁷⁸ Out of the total of 725 days of delay, 334 are imputable to CB&I and 391 to Reficar, pursuant to the analysis in Section VII.2.3 *supra*.

2190. In sum, CB&I breached the Cost and Schedule Control Commitments, all of which were essential obligations under the Contract thereby evidencing that it acted with *culpa grave*. Furthermore, there is no plausible explanation for CB&I's failure to provide precise and trustworthy cost and time estimations, other than that it acted with *culpa grave*.

B. Magnitude of the breach and damage caused

2191. The second criterion concerns the magnitude of the breach (a.) and the foreseeable damage caused by the breach (b.): if the breach was material and/or led to a significant harm, this is indicative of *culpa grave*.

a. Magnitude of the breach

2192. The purpose of the Cost and Schedule Control Commitments was to guarantee that the Project would be built for a cost and within a time frame equal to, or as close as possible, to the estimates provided by CB&I.

2193. The failure to control costs on the EPC Project is visible from the findings on liability made in this Award:

- the total amount awarded by the Tribunal as Improper Costs (USD circa 800 million) is almost ten-times higher than the total aggregate Liability Cap (USD 87.75 million),
- the Improper Costs were not motivated either by events outside of the Parties' control or by events for which Reficar is responsible – all potential Excluded Costs have already been discounted by the Tribunal,
- the Improper Costs are almost six-times the amount that CB&I itself expected to earn on the Project as gross profit: USD 135 million²¹⁷⁹,
- on their own, the Improper Costs would amount to the costs of another large-to-mega-project²¹⁸⁰.

2194. As with costs, the magnitude of CB&I's breach of the Schedule Control Commitments is daunting: the Parties agreed in June 2010 for CB&I to deliver the Project by February 2013; the Project ended up being delivered two years after the Guaranteed Mechanical Completion Date agreed by the Parties in the Contract, in February 2015. Thus, the Project ended up lasting almost twice as long as had been agreed.

2195. The Tribunal has found that CB&I was solely responsible for a total of 334 days of delay – nearly a year. In the Tribunal's view, a delay of almost a year on a Project originally scheduled to only take a total of two and a half years serves as a further indication of the sheer magnitude of CB&I's failings.

²¹⁷⁹ USD (million) 800/135= 5.925925(...) or 5.93.

²¹⁸⁰ See B&OB ER, para. 32 for a definition of megaprojects as opposed to large projects. See also Ex. B-004, pdf p. 9.

CB&I's counterargument

2196. CB&I argues that it could not have breached its Schedule Control Commitments with *culpa grave*, because only less than a half of the number of days of delay to the Project schedule can be attributed to CB&I's sole responsibility²¹⁸¹.

2197. The Tribunal disagrees.

2198. What matters to determine the magnitude of the breach is that CB&I issued a Representation Letter making a representation as to the +/- 5% accuracy of the schedule predictions. And after that representation, the delay attributable to CB&I still amounted to around a year.

2199. In sum, if the Project were CB&I's own, it is highly unlikely that CB&I would have allowed the costs to explode by almost USD 800 million and the schedule by almost a year. Because CB&I did so, the Tribunal finds the magnitude of CB&I's breaches and damage caused as indicative of it acting with *culpa grave*.

b. Damage caused

2200. As regards damages, from early on in the Project CB&I was fully aware that it was in continuous breach of both the Cost and Schedule Control Commitments and that such breach would cause harm in the form of Excess Costs (including prolongation costs).

2201. The most obvious manifestation of the damage is, thus, in the form of Excess Costs²¹⁸².

2202. But there is an added negative effect: these Excess Costs could provoke personal liability of Reficar's management. Reficar is a company owned by the Colombian State, through Ecopetrol. As public companies, their expenses are public expenditures, and subject to review by the *Contraloría* – a powerful entity entrusted with the supervision of public expenditures²¹⁸³ and empowered by law to charge Ecopetrol's and Reficar's officers with public offences and personal responsibility, if (in the *Contraloría*'s judgment) they had failed to properly control public expenditure.

2203. There is ample evidence that Reficar informed CB&I, and that CB&I was perfectly aware, of the interests at stake, if the Cost and Schedule Control Commitments were not observed²¹⁸⁴ – and that, notwithstanding this awareness, CB&I failed to take any remedial action.

2204. Summing up, the Tribunal finds that the damage caused by the breach of the Cost and Schedule Control Commitments was significant, and that such harm was foreseeable – this being another indicator of CB&I's *culpa grave*.

²¹⁸¹ RPHB, para. 221.

²¹⁸² See Section VII.2.1 *supra*.

²¹⁸³ JER 11 on Colombian Fiscal Liability Law, Issue 6, pdf pp. 5-9.

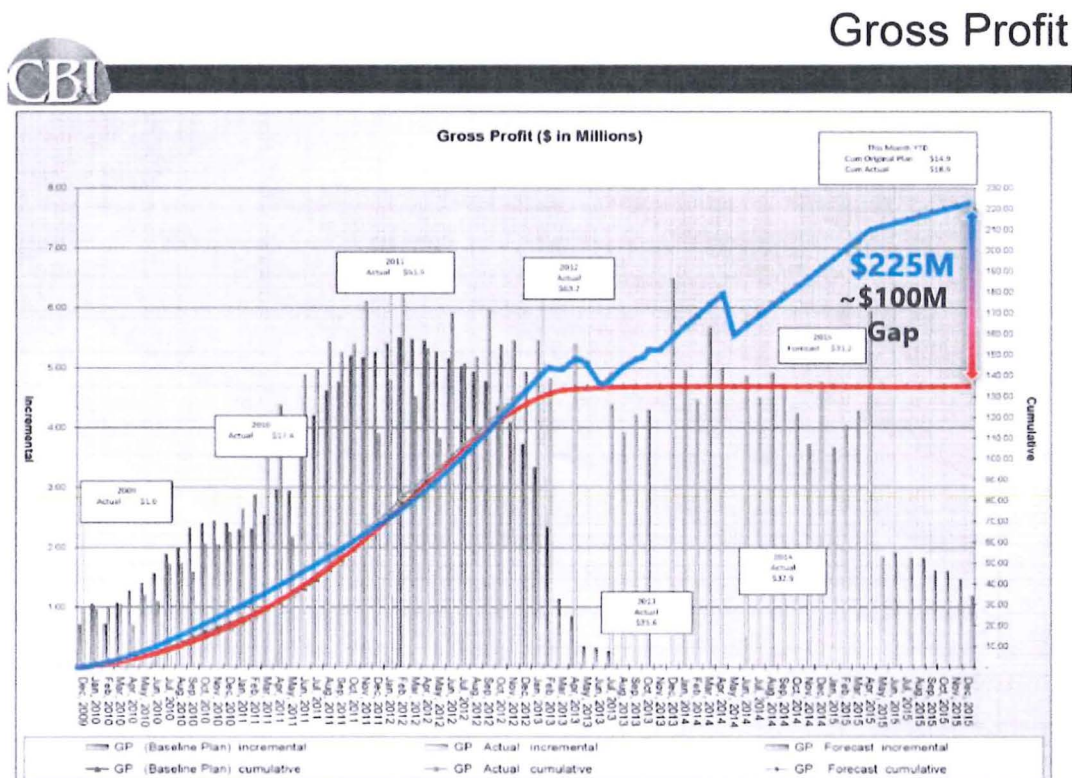
²¹⁸⁴ See e.g., Ex. C-0094; Ex. C-0095; Ex. C-0097; Ex. C-0115; Ex. C-0121; Ex. C-0136.

Self-dealing by CB&I

2205. Respondents' breach did not only cause damages to Reficar, but at the same time, it also led to CB&I's own enrichment.

2206. In accordance with the provisions on remuneration in the EPC Contract, CB&I was initially entitled to earn USD 175.75 million²¹⁸⁵ – an amount which CB&I subsequently readjusted to USD 135 million in its internal projections²¹⁸⁶.

2207. However, the graph below, which is a slide from CB&I's Project Manager Review presentation at the end of the Project²¹⁸⁷, shows that CB&I finally managed to obtain USD 225 million in gross profits, which represents an additional unexplained profit of USD 90 million:



2208. Are there convincing explanations for this additional profit?

2209. A possible explanation could be Change Orders, which significantly increased the size of the Project; the accepted change orders, however, only amount to USD 10.5 million²¹⁸⁸. Another possible explanation is the Health and Security Bonus, which

²¹⁸⁵ See discussion under Pre-Contractual Liability Section VII.1.1.7.B.

²¹⁸⁶ See Mr. Deidehban's testimony at Tr. 1497:23-1498:7.

²¹⁸⁷ Ex. C-1329, p. 36. The version used by the Tribunal is the one presented by Claimant in CPHB, para. 18.

²¹⁸⁸ ESOD, fn. 14, p. 16; CB&I simultaneously argues that Reficar rejected most of such extra work WNOCs, see RPHB, para. 479.

CB&I only achieved in 2010²¹⁸⁹. This still leaves unexplained gross profits in the amount of almost USD 80 million, or over 50% more than agreed with Reficar.

2210. At the Hearing, the Tribunal asked Mr. Deidehban about potential sources of additional revenue, apart from the Fixed Fee arrangement, fee mark-up for Change Orders and the various performance bonuses CB&I was entitled to. When pressed on the issue, Mr. Deidehban mentioned rate arbitrage – the difference between the rate at which Reficar reimbursed to CB&I the cost of indirect hire labour and the salaries CB&I actually satisfied to these indirect hire employees²¹⁹⁰:

“The slight difference may be just an issue with the reporting, but there is no, it’s – we took up the contingency that we left for ourselves in the to get us to 175.5, plus the additional incrementals we had from change order approvals and that, and if there would have been anything in the rate arbitrage, but there wouldn’t have been any – it wouldn’t have been that significant”.

2211. The existence of profit resulting from rate arbitrage is relevant: the longer the Project went on, and the more indirect hire employees were employed, the higher CB&I’s profit. Despite Reficar’s best efforts to limit any devious incentives for CB&I through the fixed fee remuneration structure, ultimately CB&I stood to benefit from the Project languishing from February 2013 to February 2015.

2212. This finding was confirmed in the witness statement of CB&I’s former employee, Mr. Ernest Breux²¹⁹¹:

“[...] [CB&I construction block managers’] attitude was that since the Project was under a cost reimbursable contract structure, efficiency was not a priority for them. Indeed, the view of CB&I was that the longer the job went on, the more money CB&I would make” [Emphasis added].

2213. Reficar’s Mr. Suárez also confirmed at the Hearing Reficar’s preoccupation about CB&I’s interest in prolonging the Project due to its rate arbitrage-related profits²¹⁹²:

“The contract said that, for indirect hire, rates had been agreed upon, labour rates, and within these labour rates and the contract, of course, also establishes what scope that rate covers. I mean, for the lodging, catering, whatever, as determined in the contract. So for each indirect hire, there was a given rate that had to cover all those costs, plus salaries, and indemnity payments, health scheme payments, all that is required by law. But this is my belief because what happened that – the rate had to cover all what I have just mentioned, and certainly and additionally, there should be a plus to that. Why? Because the one that negotiated how the salary to be paid to each person was CB&I. So in

²¹⁸⁹ CB&I does not bring to the Tribunal’s attention the actual amount earned, or any underlying documents. See Wright Counterclaim ER, p. 60; Counterclaim ESOC, paras. 168-169, citing to Deidehban RWS, para. 68 (with no reference) and documents Ex. R-1525 and R-1526, both of which contain a number of Excel Sheets with a compilation of Onshore and Offshore accounting records without any possibility for the Tribunal to identify the relevant invoices.

²¹⁹⁰ Tr. 1498:18-1499:1.

²¹⁹¹ Breux CWS, para. 55.

²¹⁹² Tr. 1888:19-1889:12.

these rates, there was ultimately a possibility for an economic profit”
[Emphasis added].

2214. There were additional, ancillary benefits for CB&I, deriving from the extended duration of the Works:

- CB&I had a secure source of revenue for its employees: the engineers, procurement team, construction supervisors, over the years of delay,
- It could report to its investors that it was working on a project of great value,
- It could advertise itself as being entrusted with this highly important Project, and
- It could cover the costs of its Island Park facility, which apparently had been underperforming prior to being entrusted with certain works for the Project²¹⁹³.

2215. Thus, the Tribunal finds that the evidence proves that CB&I obtained additional profits from the extended duration of the Works (mainly, through rate arbitrage). This self-dealing is indicative of CB&I having breached the Cost and Schedule Control Commitments with *culpa grave*.

C. Reckless attitude

2216. According to the CCC, *culpa grave* is the failure to manage others’ affairs with even less care than that expectable from a negligent or imprudent person managing their own business.

2217. The Tribunal notes that the very definition of the Cost Control Commitments encompasses some *culpa grave* notions:

“Even though a reimbursable contract CB&I project management will rigorously control cost and schedule similar to a lump sum contract safeguarding Reficar resources as if their own” [Emphasis added].

2218. The relevant point is, thus, whether in failing to safeguard Reficar’s resources, CB&I deployed a degree of care that was below the standard expected from a negligent or imprudent person.

2219. *Res ipsa loquitur*: cost overruns amounting to more than USD 800 million and achieving Mechanical Completion two years after the guaranteed date to do so, with a year’s time of solely-caused delays, can only be interpreted as the result of a reckless disregard for controlling costs and schedule. There is ample evidence to prove this averment:

2220. First, Mr. Deidehban, CB&I’s highest officer on the Project, conceded that the standard for submitting costs to Reficar was²¹⁹⁴:

²¹⁹³ See para. 1249 and supporting evidence *supra*.

²¹⁹⁴ Tr 1127:17-1127:18.

“If I incurred costs associated with the work, they are reimbursable”.

2221. Mr. Suárez, Reficar’s Deputy Project Manager (and later Project Director), confirmed this²¹⁹⁵:

“I was shocked to see CB&I’s Project Team adopt an attitude that the Project would ‘cost whatever it cost’ and frequently state that ‘it is what it is.’ These are phrases I heard several times from CB&I’s management team on the Project, including from Mr. Deidehban himself” [Emphasis added].

2222. And so did Mr. Houtz, Reficar’s engineer²¹⁹⁶:

“Reficar made constant requests for explanations as to why CB&I was incurring delays and ever increasing hours. During many of these meetings Mr. Deidehban would simply say that ‘it is, what it is’ and ‘this is a cost reimbursable contract.’ Indeed, the phrase ‘it is, what it is’ became CB&I’s motto and was repeated to us on many occasions. [...] Second, CB&I would then argue that Reficar was interfering with its means and methods (which was not true) and, ultimately, end the discussion by telling again us that “it is, what it is” [Emphasis added]”.

2223. The above statements show no degree of care on CB&I’s side when incurring costs.

2224. Second, the reckless disregard to controlling cost and schedule are reflected in CB&I’s contemporaneous communications from 2013, which prove that it believed to be entitled to all costs submitted for reimbursement, according solely to its judgment, and regardless of its duty of care:

“Whether the schedule is extended to August 31, 2013, August 22, 2014 or any other date, CB&I is entitled to be compensated for extended performance costs associated with that time extension”²¹⁹⁷, and

“While CB&I acknowledges that it does not have a “blank check” to enlist unlimited resources, Reficar is nonetheless required to approve those resources that CB&I reasonably deems necessary to enable its means and methods in performing the Work”²¹⁹⁸ [Emphasis added].

2225. Third, the Tribunal is convinced that the above-mentioned attitude contributed to CB&I’s inaction vis-à-vis the increase in costs – CB&I did not believe it was breaching the Contract, did not contemplate increasing costs as damages and, hence, it did not take actions to mitigate the over-run. CB&I did not take any responsibility for the situation it had created.

2226. The Tribunal is convinced that, had CB&I treated the Project as a lump sum contract in which cost overruns risks lay with CB&I – as it should, according to the Cost Control Commitments – costs would not have increased the way they did.

²¹⁹⁵ Suarez CWS, para. 80.

²¹⁹⁶ Houtz CWS, para. 193.

²¹⁹⁷ Ex. C-0102, p. 2.

²¹⁹⁸ Ex. C-0378, p. 4.

2227. It is worth noting that by September 2012, the Monthly Forecast had reached USD 4.221 billion²¹⁹⁹ (which is higher, but still reasonably close to the Representation Forecast), but by October 2012, just one month later, the estimation had skyrocketed to USD 5.467 billion²²⁰⁰, an increase of some USD 1.25 billion (or 23%). Had CB&I treated overrun costs as if they came out of its own pocket, the reaction would have been to implement immediate cost reduction measures. No reasonable contractor would simply accept that its profits will decrease by USD 1.25 billion, without trying to avoid such outcome by all possible means.

2228. But CB&I took no cost reduction action. It simply presented the new augmented cost estimations as a *fait accompli*, assuming no responsibility for the Excess Costs it was causing.

2229. The same is true for the Project schedule: after making a representation as to the +/- 5% accuracy of the schedule, the delay attributable to CB&I amounted to around a year; indicating a reckless disregard to Reficar's interests.

2230. In sum, CB&I's failed to honour its Cost and Schedule Control Commitments in a reckless way, taking no responsibility for the spiralling costs and schedule, and failing to implement mitigation actions, as if the business were its own – thereby acting with *culpa grave*.

2.5. CONCLUSION

2231. CB&I's breaches of the Cost and Schedule Control Commitments meet all of the criteria under the three-prong test applied above:

- The Cost and Schedule Commitments were all essential obligations;
- The breaches by CB&I were material and led to foreseeably significant damages;
- CB&I showed recklessness, taking no responsibility for the increases in costs and time and failing to adopt mitigating actions.

2232. As a result, the Tribunal finds that CB&I breached its Cost and Schedule Control Commitments with *culpa grave*. Thus, the Liability Caps do not find application to the damages awarded as a result of those breaches.

CB&I's counterarguments

2233. CB&I brings two counterarguments which would prove that it could not have acted with *culpa grave*: first, because only major construction errors could amount to *culpa grave* and there are no such allegations by Reficar (i.), and second, because findings of *culpa grave* are fundamentally rare (ii.).

2234. (i.) CB&I suggests that on an EPC contract, such as the one between the Parties, only major construction errors could be indicative of the contractor acting with

²¹⁹⁹ Ex. C-0093, pp. 4, 39.

²²⁰⁰ Ex. C-0096, p. 13; the Tribunal notes that the same document offers different ranges for the reforecast at p. 17.

*culpa grave*²²⁰¹. CB&I bases its argument on the decision in *Edificio Centro de Comercio Internacional*.

2235. But the decision in *Edificio Centro de Comercio Internacional* does not, at any point, posit that *culpa grave* in the performance of construction contracts may only be found with regard to the performance of construction activities. It only so happens that in the factual circumstances of that case, the contractor's *culpa grave* took the form of severe construction errors, that resulted in installing piping that could not serve its purpose. But that does not in any way preclude the current Tribunal's finding that CB&I acted with *culpa grave* in breaching its Cost and Schedule Control Commitments.

2236. (ii.) CB&I also argues that, because the standard for finding *culpa grave* is so high, it is fundamentally rare for courts or tribunal to issue decisions finding this standard to be met.

2237. CB&I's argument is misguided.

2238. Although CB&I does not provide any underlying data for its proposition, the Tribunal notes that the 2014 Colombian Supreme Court ruling analysed *supra* under the Subsection 2.3.C.b on case law mentions the "notorious infrequency" and "exceptional character" of the actions tainted by *culpa grave*. But the Tribunal has already clarified that such qualifications only have a bearing on the required degree of negligence; it is not a guideline for decision-makers to limit its power to find for *culpa grave*.

2239. Even if, *arguendo*, CB&I were correct about the actual infrequency of decisions finding *culpa grave*, this would not impact this Tribunal's decision. The facts of the current case – the only controlling factor for the Tribunal's decision – have been analysed in this Section and are compelling: CB&I acted with *culpa grave* and no statistics on frequency can change this.

2240. In any event, the Parties have pointed the Tribunal to a number of decisions under Colombian law with a positive finding of *culpa grave*, which further defeats CB&I's argument.

Dolo

2241. Reficar makes a subsidiary argument that CB&I's actions also amounted to contractual *dolo*.

2242. The Tribunal need not address this argument as the finding of *culpa grave* is sufficient to decide that the amounts awarded for CB&I's breaches of Cost and Schedule Control Commitments fall outside the scope of the Liability Cap.

2.6. ANALYSIS UNDER NEW YORK LAW

²²⁰¹ ESOD, para. 1456.

2243. The Tribunal is convinced that its finding of CB&I having acted with *culpa grave* with regard to the Cost and Schedule Control Commitments is sufficient to disapply the Liability Caps. In an abundance of caution, however, the Tribunal will make a finding that the result of the analysis would be the same, applying the concept of gross negligence under New York law.

A. The Parties' positions

2244. Reficar's standards for gross negligence under New York law include conduct that:

- "evinces a reckless indifference to the rights of others"²²⁰²,
- constitutes "a failure to use even slight care, or conduct that is so careless as to show complete disregard for the rights and safety of others"²²⁰³, or
- "smacks of intentional wrongdoing"²²⁰⁴.

2245. Reficar cites to *F. D. Borkholder Co., Inc. v. Sandock*, in which a construction company was found to have acted in gross negligence when, building an additional room to a pre-existing structure, it knowingly²²⁰⁵:

- Failed to fill a wall suffering from a moisture problem with concrete and shortened the roofline, contrary to design plans,
- Later assured the owner that the moisture problem was caused by simple condensation, which was not the case, and
- Finally promised to fix the moisture problem but never did.

2246. Reficar additionally references *Internationale Nederlanden*. In this case, the note holders of a company that subsequently entered into bankruptcy accused a trust company tasked with managing the company's voting by failing to correctly transmit the note holders' votes on distribution options, leading to the invalidity of their ballot and severe resulting monetary damages²²⁰⁶. The New York Court of Appeals specifically found that "several acts of negligence with foreseeably severe cumulative effect", in this case the discrete acts of failure to properly manage the votes submitted by note holders, can in aggregate constitute gross negligence, citing to *Food Pageant*²²⁰⁷.

2247. Reficar also cites to *Hyatt v. United States*²²⁰⁸, a case in which the New York court found gross negligence on the basis of a totality of circumstances²²⁰⁹. Another case cited to by Reficar, *Bothmer v. Schooler, Weinstein, Minsky & Lester, P.C.*,

²²⁰² ESOC, para. 806, citing to *Johnson v. Smith*, 2006 N.Y. Misc. LEXIS 2618, at *27 (N.Y. City Ct. Sept. 8, 2006), CL-0122, * 42 at pdf p. 14.

²²⁰³ ESOC, para. 805, citing to New York Pattern Jury Instructions - Civil § 2:10A, CLA-0124.

²²⁰⁴ ESOC, para. 806, citing to *Sommer*, 79 N.Y.2d at 554 (citation and alteration omitted), CL-0123.

²²⁰⁵ ESOC, para. 807, citing to *F.D. Borkholder Co., Inc. v. Sandock*, 413 N.E.2d 567, 568 (Ind. 1980), CL-0126.

²²⁰⁶ CL-0684.

²²⁰⁷ CL-0684, para. 5 on pdf p. 5.

²²⁰⁸ CL-0680.

²²⁰⁹ Reply, para. 179, citing to *Hyatt v. U.S.*, 968 F.Supp. 96, 111 (E.D.N.Y. 1997).

according to Reficar contains phrasing that suggests that the degree of negligence could rise if the negligent action persisted over the course of years²²¹⁰.

CB&I's position

2248. CB&I argues that under New York law, there is no precise definition of “gross negligence” but that there is unanimous agreement that there is a need to meet a “high bar” to make such a finding²²¹¹; gross negligence “is clearly intended to represent something more fundamental than failure to exercise proper skill and/or care”²²¹².

2249. According to CB&I, the test for finding gross negligence was elaborated under *Radiology and Imaging Specialists*:

“a compelling demonstration of egregious intentional misbehavior evincing extreme culpability: malice, recklessness, deliberate or callous indifference to the rights of others, or an extensive pattern of wanton acts”²²¹³,

and *Matter of Part 60 Put-Back Litig*

“when invoked to pierce an agreed-upon limitation of liability in a commercial contract, must smack of intentional wrongdoing or evince a reckless indifference to the rights of others”²²¹⁴.

2250. Other definitions cited by CB&I include conduct which “smacks of intentional wrongdoing”²²¹⁵, “conduct that evinces a reckless disregard for the rights of others”²²¹⁶ and “the failure to exercise even slight care”²²¹⁷ – but not merely “misguided” or “over-hasty pursuit” of one’s contractual duties²²¹⁸.

2251. In addition, CB&I argues that the presence of “material causative factors for which [the defendant] is not liable” also precludes a finding of gross negligence²²¹⁹.

²²¹⁰ Reply, para. 179, citing to *Bothmer v. Schooler, Weinstein, Minsky & Lester, P.C.*, 266 A.D.2d 154 (N.Y. App. Div. 1999).

²²¹¹ RPHB, para. 512.

²²¹² ESOD, para. 1472, citing to *Red Sea Tankers Ltd. v. Papachristidis (The Ardent)* [1997] 2 Lloyd’s Rep. 547, 586.

²²¹³ RPHB, para. 512, citing to *Radiology and Imaging Specialists*, 2021 WL 149027, at *2 (internal quotations omitted).

²²¹⁴ RPHB, para. 512, citing to *Matter of Part 60 Put-Back Litig.*, 36 N.Y.3d at 352 (internal quotations omitted).

²²¹⁵ ESOD, para. 1467, citing to *Red Sea Tankers Ltd. v. Papachristidis (The Ardent)* [1997] 2 Lloyd’s Rep. 547, 581(Comm) (emphasis added) and *Matter of New York City Asbestos Litig.*, 89 N.Y.2d 955, 956–57 (1997).

²²¹⁶ ESOD, para. 1467, citing to *Gold Connection Discount Jewelers v. Am. Dist. Tel. Co.*, 212 A.D.2d 577, 578 (2d Dep’t 1995).

²²¹⁷ ESOD, para. 1467, citing to *Food Pageant v. Consol. Edison Co.*, 54 N.Y.2d 167, 172 (1981).

²²¹⁸ ESOD, para. 1468, citing to *Red Sea Tankers Ltd. v. Papachristidis (The Ardent)* [1997] 2 Lloyd’s Rep. 547, 622 (Comm).

²²¹⁹ ESOD, para. 1478, citing to James Pickavance & James Bowling, “Exclusions from Immunity: Gross Negligence and Wilful Misconduct”, Address at the Society of Construction Law (Sept. 5, 2017).

B. Tribunal's analysis

2252. The Tribunal, having reviewed both Parties' submissions, finds that the standard for gross negligence under New York law is in substance very similar to that of *culpa grave* under Colombian law. To make a finding of gross negligence, it is necessary to establish the existence of the same degree of culpability, namely "reckless disregard" for the rights of the counterparty.

2253. The Tribunal is confident that its previous test for *culpa grave* under Colombian law may also serve to establish that CB&I acted with gross negligence under New York law.

2254. The tests used by New York courts and invoked by CB&I are undoubtedly met by CB&I's breaches of the Cost and Schedule Control Commitments; for the purposes of comprehensiveness, the Tribunal will address three such decisions using its previous findings:

2255. (i) *Red Sea Tankers Ltd.*:

"[gross negligence] is clearly intended to represent something more fundamental than failure to exercise proper skill and/or care"²²²⁰.

2256. CB&I did not simply fail to exercise proper skill and/or care; it allowed cost overruns of some USD 800 million and delays in Mechanical Completion of two years, with one year's worth of solely-caused delay – this proves a spectacular, rather than ordinary, failure by CB&I to control cost and schedule.

2257. (ii) *Radiology and Imaging Specialists*:

"a compelling demonstration of egregious intentional misbehavior evincing extreme culpability: malice, recklessness, deliberate or callous indifference to the rights of others, or an extensive pattern of wanton acts"²²²¹,

2258. The magnitude of the results of CB&I's breaches serve as a compelling demonstration evincing extreme culpability. CB&I would not have allowed for such ballooning of cost and time overruns unless it showed callous indifference to Reficar's rights.

2259. (iii) *Matter of Part 60 Put-Back Litig.*:

"when invoked to pierce an agreed-upon limitation of liability in a commercial contract, must smack of intentional wrongdoing or evince a reckless indifference to the rights of others"²²²².

2260. The Tribunal's previous findings hold CB&I responsible for behaviour which shows its reckless disregard to the rights of Reficar, which means that CB&I's gross

²²²⁰ ESOD, para. 1472, citing to *Red Sea Tankers Ltd. v. Papachristidis (The Ardent)* [1997] 2 Lloyd's Rep. 547, 586.

²²²¹ RPHB, para. 512, citing to *Radiology and Imaging Specialists*, 2021 WL 149027, at *2 (internal quotations omitted).

²²²² RPHB, para. 512, citing to *Matter of Part 60 Put-Back Litig.*, 36 N.Y.3d at 352 (internal quotations omitted).

negligence may rightfully be invoked to pierce the agreed-upon Liability Cap in the EPC Contract.

CB&I's counterargument

2261. One particular example that CB&I invokes as alleged proof of a very high standard for finding gross negligence under New York law, is *Tougher Industries*²²²³; however, CB&I gives an incomplete picture of this decision.
2262. The New York Supreme Court in that case did not decline to make a finding of gross negligence despite finding “a multitude of design errors and other issues”, as claimed by CB&I²²²⁴. Instead, the Court did not find gross negligence because of the existence of additional provisions in the contract that made the counterparty responsible for
- examining the project site and accepting it, and
 - finalizing and updating the project schedule, which was prepared so poorly that it constituted the reason for the claim of gross negligence of the defendant²²²⁵.
2263. Thus, this was a case of dismissing a claim of gross negligence due to the existence of material contributory negligence, rather than a failure to find gross negligence because “only the most egregious, knowing actions” can amount to a finding of gross negligence, as claimed by CB&I²²²⁶.
2264. The Tribunal has not found contributory negligence on Reficar's part in the current case and thus CB&I's counterargument is inapposite.
2265. CB&I also uses *Tougher Industries* to argue that “misguided” or “over-hasty pursuit” of contractual duties does not amount to gross negligence.
2266. The Tribunal does not disagree with the clarification under *Tougher Industries*.
2267. The argument is, however, unhelpful to CB&I, as its breaches of the Cost and Schedule Control Commitments did not arise because CB&I was “misguided” – in fact, it was fully aware of the clearly foreseeable damages of its failures.
2268. In addition, CB&I engaged in the opposite of an “over-hasty pursuit” of its contractual obligations: it allowed for the delays to accumulate while at the same time benefitting from each day Mechanical Completion was pushed back in time, as proven by the evidence on record.

* * *

2269. Summing up, even by applying New York law, the Tribunal reiterates its finding that the Liability Caps do not find application to the damages awarded for CB&I's

²²²³ *Tougher Indus., Inc. v. Dormitory Authority*, 130 A.D.3d 1393, 1396 (3d Dep't 2015).

²²²⁴ ESOD, para. 1468.

²²²⁵ RL-263, pdf p. 2.

²²²⁶ ESOD, para. 1468.

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breaches of the Cost and Schedule Control Commitments, because those damages arose from CB&I's gross negligence.

Willful misconduct

2270. Taking into account the Tribunal's finding that CB&I breached the Cost and Schedule Control Commitments with gross negligence and that, as a result, the Liability Caps are not applicable, a further analysis of willful misconduct under New York law would be moot.

VIII.2. SET-OFF AND LIQUIDATION

2271. The Tribunal has established that CB&I owes Reficar USD 1,008.41 million, which comprises:

- USD 845.4 million due to the breach of the Cost Control Commitments,
- USD 152.75 million due to the breach of the Schedule Control Commitments, and
- USD 10.3 million due to the breach of CB&I's obligation to provide the Works free of defects.

2272. Reficar, in turn, owes²²²⁷:

- To CB&I UK: USD 914,939 under the Offshore Contract, and
 - To CBI Colombiana: COP 28,256,049 under the Onshore Contract,
- for unpaid invoices.

2273. Both Parties have asked the Tribunal to perform a set-off of the amounts awarded²²²⁸.

1. AUTHORITY TO SET-OFF

2274. As an initial matter, under Colombian law, set-off of mutually due, liquid obligations expressed in monetary terms²²²⁹ operates as a matter of law (*ipso iure*)²²³⁰:

“ARTICULO 1714. <COMPENSACIÓN> Cuando dos personas son deudoras una de otra, se opera entre ellas una compensación que extingue ambas deudas, del modo y en los casos que van a explicarse”.

2275. The amounts awarded by the Tribunal are, without a doubt,

- mutually due (either from CB&I to Reficar or from Reficar to CB&I),
- liquid (as of the Liquidation Date, as analysed *infra*), and

²²²⁷ See para. 1524 *supra*.

²²²⁸ CPHB, para. 498; RPHB, para. 675, request for relief g.

²²²⁹ Art. 1715 of the CCC, RL-691:

“ARTICULO 1715. <OPERANCIA DE LA COMPENSACION> La compensación se opera por el solo ministerio de la ley y aún sin conocimiento de los deudores; y ambas deudas se extinguen recíprocamente hasta la concurrencia de sus valores, desde el momento que una y otra reúnen las calidades siguientes:

1.) Que sean ambas de dinero o de cosas fungibles o indeterminadas de igual género y calidad.

2.) Que ambas deudas sean líquidas; y

3.) Que ambas sean actualmente exigibles.

Las esperas concedidas al deudor impiden la compensación; pero esta disposición no se aplica al plazo de gracia concedido por un acreedor a su deudor”.

²²³⁰ Art. 1714 of the CCC, also RL-0794, pdf pp. 3-12

- expressed in monetary terms (the set-off will only be performed for amounts expressed in USD).

2276. The Parties have, under the Coordination Agreement, specifically agreed that Reficar would have set-off rights for any amounts it is owed under one contract against amounts it owes to CB&I under another contract²²³¹:

“3.5 Set-Off

The Contractors agree and accept that there may be circumstances in which it may be to the advantage of the Owner to set-off the amount owed to the Owner under one of the Contracts against amounts owed by the Owner under the other Contract. Neither of the Contractors shall contend, whether in legal proceedings or otherwise, that the Owner is not entitled to exercise such rights of set-off, provided that the Owner may only set-off amounts in accordance with the terms and conditions of the relevant Contract”.

2277. Both Parties accept that Reficar’s above prerogative extends to the Tribunal, which is empowered to perform a set-off of the amounts owed by each party to the counterparty²²³².

Limitation

2278. There is, however, a limitation to the Tribunal’s power to order a set-off between the awards amounted under the claims with those awarded under the counterclaims.

2279. As correctly pointed out by CB&I, Art. 17, para. 2 of Colombian Law 1116 of 2006 prohibits movements of assets (including set-offs) of companies which are subject to judicial liquidation proceedings without a prior authorisation by the judge²²³³:

“A partir de la admisión al proceso de insolvencia, de realizarse cualquiera de los actos a que hace referencia el presente artículo sin la respectiva autorización, será ineficaz de pleno derecho [...]”.

[“From the moment of the admission of the insolvency process, if any of the operations referred to in this article are performed without the respective authorization, they will not have legal effect *ipso jure* [...]”].

2280. As of the most recent update to the Tribunal, CBI Colombiana is an entity in the process of judicial liquidation²²³⁴.

2281. For this reason, the set-off ordered by the Tribunal cannot impact the COP 28,256,049 credit which CBI Colombiana holds vis-à-vis Reficar – the only credit which can be off-set is CB&I UK’s credit for USD 914,939. (The prohibition of set-off does not affect CBI Colombiana’s joint and several liability under Section VIII.2.4 *infra*)

²²³¹ JX-007, p. 33.

²²³² CPHB, para. 498; RPHB, paras. 635-642.

²²³³ RPHB, para. 639, fn. 1412.

²²³⁴ Letter from the Liquidator dated November 11, 2020.

2. DATE FOR THE SET-OFF

2282. Both Parties agree that the Tribunal should set off all amounts as of a single date rather than attempting to perform different set-offs at various stages of the Project²²³⁵.

2283. As to the specific date of set-off, Reficar simply refers to the EPC Agreement's provisions on contract liquidation²²³⁶ and acknowledges that the Tribunal has full discretion. Whereas CB&I argues that the Tribunal should perform the set-off as of the date of the Award, because this is the time when, under Colombian law, "the amount of the debts will become liquid, undisputed, due, and owing"²²³⁷.

2284. The Tribunal sides with Claimant.

2285. The proper date for set-off is the agreed date for the liquidation of the EPC Contract [the "**Liquidation Date**"], because TC 78.3 provides that, as of that date, the Parties' reciprocal accounts are to be settled:

"78.3 Once the Agreement has been liquidated, the Owner will pay the Contractor, if applicable, any amounts outstanding in respect of the Work that result from the Liquidation, subject to any applicable withholdings and deductions".

2286. Which is the appropriate Liquidation Date in the present situation?

2287. TC 78.1 provides the guiding principle. The EPC Agreement should be liquidated within three months of either²²³⁸:

- the completion of all Works plus the Owner certifying that the Works have successfully undergone the performance tests, or
- the termination of the Agreement.

2288. Given that the Agreement has not been terminated, the first alternative is applicable: the Liquidation Date should fall three months after the completion of all Works and after the certification by Reficar that the performance tests have been successful.

2289. In the present case, the Works were never formally finalized (and there is no evidence that Reficar ever issued documentation confirming the successful testing

²²³⁵ CPHB, para. 499; RPHB, para. 636.

²²³⁶ CPHB, paras. 499-500.

²²³⁷ RPHB, para. 640.

²²³⁸ TC 78.1, JX-002, p. 267; JX-004, p. 242:

"78.1 Within the three (3) months (or such longer period as the Parties may agree) following the earlier of the date of:

(i) completion of all the Work (other than Defect warranty obligations) and the issue by the Owner of the Performance Certificate; or

(ii) termination of this Agreement for cause or for convenience in accordance with TC64 and TC65, respectively,

the Contractor and the Owner shall proceed to the Liquidation of the Agreement [...]"

of the Refinery). But there is evidence in the record showing when CB&I stopped working on the Project and performed its demobilisation:

- Mechanical Completion was achieved in February 2015, but thereafter CB&I continued performing certain activities, such as completing Category “A” Check Sheets and “A” Punchlist items (see Section on Improper Delay *supra*);
- CB&I demobilised from the construction site in Cartagena in the fall of 2015; Reficar acknowledges that CB&I left the Project in October 2015²²³⁹;
- The Refinery began preliminary operations in November 2015²²⁴⁰.

2290. Taking all the evidence into consideration, CB&I ceased performing Works on the Project around October 2015. Adding three months, as per TC 78.1, brings the Liquidation Date to the end of 2015.

2291. For these reasons, the Tribunal decides that the proper Liquidation Date of the EPC Agreement should be December 31, 2015, and that this date should also be used for the set-off of reciprocally owed credits.

3. APPLICATION

2292. The consequence of set-off is that the reciprocal credits held by two persons, who are creditors of each other, are deemed paid and settled in the concurring amount, as of a certain date.

2293. Applying this principle, Reficar’s claim against CB&I UK deriving from this Award, in an amount of USD 1,008,410,000, should be deemed partially paid and settled through set-off, against CB&I UK’s counterclaim against Reficar in an amount of USD 914,939, as also adjudicated in this Award, resulting in a net credit held by Reficar against CB&I UK in an amount of USD 1,007,495,061.

2294. Reficar must, however, pay the amounts awarded under the Offshore Contract to CBI Colombiana for unpaid invoices, in an amount of COP 28,256,049.

2295. There is an additional amount that the Tribunal must take into account for purposes of set-off: the USD 70 million that Reficar has already obtained under the Performance LoC, as analysed under Section VII.2.2.3 *supra*. The amounts awarded to Reficar must be reduced by these USD 70 million already collected by Reficar, to avoid that Claimant obtains double recovery. Thus, the amount in USD to which Reficar is entitled in accordance with this Award is USD 937,495,061²²⁴¹.

4. JOINT AND SEVERAL LIABILITY OF THE CB&I RESPONDENTS

2296. So far, the Tribunal has treated the CB&I entities collectively; however, the three Respondents

²²³⁹ CPHB, para. 1; ESOC, para. 598.

²²⁴⁰ ESOC, para. 101.

²²⁴¹ 1,007,495,061-70,000,000= 937,495,061.

- CBI Colombiana S.A.,
- CB&I UK LTD., and
- Chicago Bridge & Iron Company N.V. (CB&I N.V.)

are corporations with separate legal personality.

2297. *Pro memoria*, Reficar entered into:

- the Offshore Contract with CB&I UK, mostly for the performance of engineering and procurement services, and
- the Onshore Contract with CBI Colombiana, mostly for the performance of construction works, while
- CB&I N.V. issued two Contractor Performance Guarantees in favour of Reficar; one in respect of the obligations of CB&I U.K.²²⁴², and another in respect of the obligations of CBI Colombiana²²⁴³.

The Parties' positions

2298. One of the questions asked by the Tribunal after the conclusion of the Hearing concerned the status of the three CB&I entities in the arbitration: which among CB&I UK, CBI Colombiana and CB&I N.V. should be held liable for any damages potentially awarded by the Tribunal²²⁴⁴.

2299. According to Reficar, CBI Colombiana and CB&I UK are jointly and severally liable for all claims in the arbitration; this is the result of applying the Coordination Agreement²²⁴⁵. Furthermore, Colombian law establishes the principle that, when there are several debtors, they are presumed to be jointly and severally liable²²⁴⁶.

2300. CB&I acknowledges that CB&I UK and CBI Colombiana are indeed jointly and severally liable, under the Coordination Agreement²²⁴⁷, but argues that first, Reficar has to prove that it is bringing separate claims against each of the companies under their respective contracts²²⁴⁸:

- CBI Colombiana under the Onshore Contract, and
- CB&I UK under the Offshore Contract.

2301. CB&I says that Reficar has failed to specify which claims it is bringing under which Contract, and has failed to argue its case under New York law, with the result that

²²⁴² JX-008, pp. 17-32.

²²⁴³ JX-008. 1-16.

²²⁴⁴ Communication A 164.

²²⁴⁵ JX-007, p. 40.

²²⁴⁶ CPHB, para. 30 invoking Art. 825 of the Colombian Commercial Code: "In commercial contracts, when there are several debtors (contractors) there is a presumption that they are joint and severally liable" – no citation to exhibit.

²²⁴⁷ RPHB, paras. 16, 21, 639.

²²⁴⁸ RPHB, para. 21.

no claims are brought under the Offshore Contract; hence, Reficar cannot hold CB&I UK liable.

Discussion

2302. The Tribunal has already rejected Respondents' arguments under Section IV *supra*.

2303. The wording of the Coordination Agreement does not leave room for doubt:

"18. Joint and Several Liability

The liability and obligations of the Contractors under this Agreement and the Contracts shall be joint and several."

2304. In accordance with the Coordination Agreement, Reficar can bring its claims under the Onshore Contract or the Offshore Contract, and if either CBI Colombiana or CB&I UK is held liable for the breach of either of the Contracts, both companies will be jointly and severally responsible for any consequences which may arise out of that breach, including but not limited to paying damages.

Joint and several liability of CB&I N.V.

2305. CB&I N.V. is a guarantor. It issued a first performance guarantee in respect of CB&I U.K.'s obligations²²⁴⁹, and another in respect of CBI Colombiana's obligations²²⁵⁰.

2306. Reficar argues that CB&I N.V. is jointly and severally liable as guaranteeing "both payment and performance, and not merely collectability"²²⁵¹ and that it does so as "a primary obligor and not a surety"²²⁵². Claimant adds that this is supported by the Parties' conduct – the three CB&I entities in the arbitration appear jointly as "CB&I"²²⁵³.

2307. According to Respondents, Reficar has not advanced an indemnity claim against CB&I N.V.²²⁵⁴. This CB&I entity will, thus, only become implicated if and when a separate claim is made against it, after the conclusion of the arbitration, assuming CB&I UK and CBI Colombiana cannot fully cover the amounts awarded by the Tribunal.

2308. Reficar replies that it invoked the Parent Guarantees as early as in April 2015²²⁵⁵:

As a result, Reficar writes to invoke its rights under the Guarantees and requests that Chicago Bridge & Iron Company N.V. take immediate steps to cause CB&I to fully and promptly perform its duties, obligations, covenants, undertakings, including but limited to the following:

²²⁴⁹ JX-008, pp. 17-32.

²²⁵⁰ JX-008. 1-16.

²²⁵¹ JX-008 (Parent Guarantees) under para. 2 on p. 6 and para. 2 on p. 22.

²²⁵² JX-008 (Parent Guarantees) under para. 2.1(a) on p. 5 and para. 2.1 on p. 21.

²²⁵³ CPHB, para. 32.

²²⁵⁴ RPHB, para. 23.

²²⁵⁵ CPHB2, p. 7, second row, responding to para. 23 of RPHB.

2309. Claimant adds that CB&I N.V. was included as primary obligor in the Statement of Claim²²⁵⁶; thus, Reficar is fully entitled to seek relief jointly and severally from all CB&I entities, including CB&I N.V.²²⁵⁷.

2310. The Tribunal sides with Reficar.

2311. Reficar has clearly invoked the Parent Guarantees, and it did so prior to the commencement of the arbitration²²⁵⁸. In addition, CB&I N.V. has been one of the named Respondents in the case, ever since the filing of the RfA in 2016²²⁵⁹.

2312. Furthermore, according to the Contractor Performance Guarantee Agreements, the Guarantor not only guaranteed the collectability of any potential debts unpaid by CBI Colombiana or CB&I U.K., but also both payment and performance of their respective obligations²²⁶⁰.

2.2 Payment and Performance

This Guarantee is a guarantee of both payment and performance, and not merely of collectability, and, until all Obligations have been irrevocably paid, discharged, met or performed in full, the Beneficiary may refrain from applying or enforcing any other moneys, security or rights held or received by the Beneficiary (or any trustee or agent on its behalf) in respect of those amounts, or apply and enforce the same in such manner and order as it sees fit (whether against those amounts or otherwise) and the Guarantor shall not be entitled to the benefit of the same.

2313. Since the payment and performance of CB&I UK and CBI Colombiana deriving from the EPC Contract has been adjudicated in the current Award, any liability found is automatically and immediately extended jointly and severally to CB&I N.V. as guarantor.

* * *

2314. For the reasons above, the Tribunal finds that Reficar may seek the relief awarded in the current arbitration from all three Respondents: CB&I UK, CBI Colombiana and CB&I N.V., all of which are jointly and severally liable.

5. LIQUIDATION OF THE CONTRACT

2315. Reficar requests that, through the resolution of the current dispute, the Tribunal²²⁶¹:

- declare that the EPC Agreement is liquidated (5.1.);
- determine the EPC Agreement's appropriate value (5.2.), and

²²⁵⁶ ESOC, para. 841.

²²⁵⁷ ESOC, para. 842.

²²⁵⁸ Ex. C-0379, p. 2.

²²⁵⁹ RfA, p. 1. "Chicago Bridge & Iron Company N.V., CB&I (UK) Limited and CBI Colombiana S.A. Respondents".

²²⁶⁰ JX-008, Section 2.2; pp. 6, 22.

²²⁶¹ Reply, para. 1022; ESOC, para. 845.

- determine the Parties' remaining rights and obligations to one another, if any (5.3.).

2316. In turn, CB&I asks that the Tribunal declare that the EPC Agreement is still in full force and effect until it is liquidated²²⁶²:

“[a] declaration that the EPC Contract is a valid and binding agreement on the parties, is still in full force and effect, and Reficar must reimburse CB&I for all reasonable and proper costs it incurs until the EPC Contract is liquidated”.

5.1. DECLARATION OF LIQUIDATION

2317. TC 1 defines “Liquidation” as the settlement and discharge of any pending liabilities or obligations between the Parties, in order to permanently conclude the relationship between them under the EPC Agreement²²⁶³:

“‘Liquidation’ means the procedure whereby both Parties, as provided in TC78, will detail the status of their liabilities and obligations under the Agreement and, to the extent agreed upon by them, will settle and discharge any pending liabilities or obligations, in order to permanently conclude the contractual relationship between them under this Agreement, irrespective of the Defects Correction Period and the obligations related to the correction of Defects”.

2318. The main provision on liquidation in the EPC Agreement is TC 78, which provides the time frame and conditions, as well as its effects on both Parties' obligations.

2319. Reficar is now asking this Tribunal to liquidate the EPC Contract.

2320. CB&I demobilized from the Works site eight years ago and since that date has performed no additional construction activity; during this period the Refinery has been functioning under Reficar's management. CB&I has failed to provide any evidence that the EPC Contract is still being performed or is otherwise in full force and effect. What the evidentiary record shows is the contrary: that for more than eight years, neither CB&I has performed, nor Reficar has demanded any performance under the EPC Contract. Given this lack of performance, for such a long time, the appropriate solution is to formally liquidate the Contract – and this is what the Tribunal will do, complying with Reficar's request.

2321. The question of the Liquidation Date has already been decided, when the Tribunal analysed and adjudicated the proper date for performing the set-off between the reciprocal credits held by Reficar and CB&I U.K. In the Tribunal's opinion, the appropriate Liquidation Date, which should also function as the proper date for set-off, is December 31, 2015.

5.2. VALUE OF THE EPC AGREEMENT

2322. Having established the Date of Liquidation, the EPC requires that the Tribunal quantify the value of the EPC Agreement. TC 58.1 provides that the actual value of

²²⁶² CB&I's Request for Relief z, ESOD, para. 1612.

²²⁶³ JX-002, p. 167; JX-004, p. 153.

the EPC Agreement is to be determined by adding all amounts paid to CB&I to which it is entitled, plus all amounts to which CB&I is entitled but payment is still outstanding:

“the actual value of this Agreement, as at the date of Liquidation, shall be determined by adding together the value of all amounts which Contractor has been paid, or is entitled to be paid, in each case in accordance with Section IV Article II”.

2323. The Tribunal will thus perform the following calculation:

- The starting point is the actual amounts paid by Reficar to CB&I (USD 5,908.2 million);
- This amount must be reduced by the costs Reficar is entitled to claw-back (USD 845.4 million), arriving at USD 5,062.8 million,
- The result must be increased by the amounts Reficar paid to its PCS contractors for the correction of CB&I's defective Works (USD 10.3 million²²⁶⁴), arriving at USD 5,073.1 million,
- And also by the amounts awarded to CB&I under the counterclaim, for invoices that Reficar should have but has not paid (USD 0.9 million and COP 28.3 million), arriving at USD 5,074 million²²⁶⁵, plus COP 28.3 million²²⁶⁶.

2324. The total value of the EPC Agreement thus amounts to USD 5,074 million plus COP 28.3 million.

5.3. SURVIVING RIGHTS AND OBLIGATIONS

2325. As regards the Parties' surviving rights and obligations, as previously advanced in Section VII.2.6 *supra*, TC 76 provides guidance as to these obligations:

“76.1 The rights and obligations of the Parties under TC1.1, 1.2, 1.3, 8, 15, 16, 17, 18, 19, 24, 44.3, 46, 56.1.21, 58.14, 59, 71, 75.2.2, 75.3.2, 75.5.4, 78, 79.1, 79.2 and 79.4 and this TC76.1 and relating to any waivers and disclaimers of liability, releases from liability, limitations of liability, indemnities, patent indemnities, confidentiality and to insurance shall continue in full force and effect regardless of whether the Work is completed or terminated and shall continue to be in full force and effect so as to protect each Contractor Group member and each Owner Group member from any loss or liability that it may incur after this Agreement is assigned, completed or terminated in accordance with its terms. Termination of this Agreement shall also be without prejudice to any accrued rights and obligations under this Agreement as at the date of termination”.

²²⁶⁴ The Tribunal is unable to quantify the amounts Reficar would have paid to CB&I for performing the same corrective works but considers the amounts paid by Reficar to its PCS contractors to be a reasonable approximation of these amounts.

²²⁶⁵ 5,073,100,000 + 914,939 = 5,074,019,939 or 5,074 million.

²²⁶⁶ 28,256,049 is rounded to 28.3 million.

2326. Therefore, the Parties have expressly foreseen which of their rights and obligations under the EPC Contract survive its liquidation. As such, these surviving rights and obligations will comprise:

- The survival clause under TC 76, which includes Indemnification Commitments, and
- The rights and obligations ordered by the Tribunal in the current Award.

VIII.3. INTEREST

2327. Both Parties are in agreement that any amounts awarded by the Tribunal should be increased by interest, pre- and post-award²²⁶⁷.

2328. Section 4.21 of the DRA stipulates that any amounts awarded in the arbitration should be paid with interest²²⁶⁸:

4.21 [...] any Arbitration Award for the payment of money shall be paid in the currency or respective currencies for payment specified in the applicable Project Agreement or Project Agreements underlying the Dispute or Disputes and with interest [...] [Emphasis added].

2329. There are two major points the Tribunal must establish regarding the interest: the relevant dates for the start and end of accrual (1.) and the applicable rate (2.).

1. START AND END DATE OF ACCRUAL

2330. Reficar offers two alternatives for the *dies a quo*, the date when the accrual of interest should start:

- a monthly basis relative to when Reficar actually expended additional funds on the basis of the expert analysis performed by Breakwater Forensics²²⁶⁹,
- the mid-point between the start of the EPC Contract on June 15, 2010 and CB&I's demobilisation on October 12, 2015, *i.e.*, February 11, 2013²²⁷⁰,

2331. When it comes to the *dies ad quem*, Reficar asks for post-award interest until the effective date of payment of the Award²²⁷¹.

2332. CB&I, on the other hand, simply references the text of the EPC Agreement and speaks of accrual "from the date of injury until payment" or, for late payments, "from the date such amount should have been paid"²²⁷². CB&I and its expert, Compass Lexecon, do, however, heavily criticise the calculations of the monthly payments as presented by Reficar's expert²²⁷³.

2333. The Tribunal is not convinced by the proposals of either Party.

2334. CB&I is correct in criticising the accuracy of the monthly payments schedules presented by Reficar's expert, because these schedules do not differentiate between payments of costs which were reasonable, proper and incurred in accordance with the Contract and payments of costs which failed to meet these requirements. Thus the analysis is of no help to the Tribunal. Reficar's subsidiary proposal of using

²²⁶⁷ ESOC, para. 824; Reficar's request for relief no. 35 under ESOC, para. 844; CB&I's request for relief no. ii, ESOD, para. 1612.

²²⁶⁸ JX-007, p. 13.

²²⁶⁹ CPHB, para. 507.

²²⁷⁰ CPHB, para. 508, citing to LI ER, para. 349.

²²⁷¹ Reficar's request for relief no. 59; CPHB, para. 532.

²²⁷² RPHB, para. 643.

²²⁷³ Compass Lexecon ER, Section IV.4 at pdf p. 105.

February 11, 2013 as the *dies a quo* would be unfair to CB&I, as at that point in time, the Works were still advancing and payments continued for at least two more years.

2335. CB&I's suggestion to calculate interest "from the date of injury" is also not helpful: as a consequence of the Bottom-Up approach, it is impossible to determine the exact date on which each Excess Cost arose.

2336. Taking into account its prior findings, the Tribunal decides that the Liquidation Date, as of which the final settlement of accounts is performed, constitutes the appropriate moment for starting the accrual of interest.

2337. As to the *dies ad quem*, both Parties are in agreement that it should be set as of the date of effective payment of any amounts awarded.

2338. Thus, the *dies a quo* used by the Tribunal for calculating interest shall be the Date of Liquidation, *i.e.*, December 31, 2015 and interest shall accrue until the date of effective payment of any amounts awarded by the Tribunal.

2. APPLICABLE RATES AND METHOD OF CALCULATION

2339. Claimant primarily requests that the Tribunal set pre-award interest at the level of Reficar's cost of capital²²⁷⁴. Claimant argues that Section 4.21 of the DRA allows the Tribunal to establish interest rates as it finds appropriate, and thus it permits to equate the rate of interest with Reficar's cost of capital (as calculated by Reficar's expert)²²⁷⁵. Subsidiarily, Reficar argues that the Tribunal should apply the contractual rate for late payments²²⁷⁶.

2340. Respondents aver that the contractual interest rate should apply as the rate mutually agreed by the Parties²²⁷⁷. CB&I's expert cites to literature stating that whenever tribunals look for the appropriate interest rate, they should first look to the contract that has given rise to the dispute²²⁷⁸.

2341. The Tribunal sides with CB&I.

2342. As a starting point, the Tribunal notes that Section 4.21 of the DRA grants it considerable leeway in its decision on interest. This Section provides a general rule²²⁷⁹:

"any Award for the payment of money shall be paid [...] with interest accruing from the date of injury until payment at the rate or respective rates of interest accruing on late payments under the applicable Project Agreement or Project Agreements underlying the Dispute or Disputes";

²²⁷⁴ CPHB2, pdf p. 28, response to para. 646.

²²⁷⁵ CPHB2, pdf pp. 27-28, response to para. 643.

²²⁷⁶ CPHB, para. 504.

²²⁷⁷ RPHB, paras. 643-646.

²²⁷⁸ RPHB, para. 646, and fn 1431 at pdf p. 274, citing to Compass Lexecon, para. 125, in turn citing to CLEX-026, Beeley, Mark and Richard E. Walck. 2014. "Approaches to the Award of Interest by Arbitration Tribunals". *The Journal of Damages in International Arbitration*, (April): 51-76, at 53 and 54.

²²⁷⁹ JX-007, p. 13.

But then the provision adds a default option: the general rule (*i.e.*, the rate of interest on late payments) is to be applied

“[u]nless otherwise decided in the Arbitration Award”²²⁸⁰.

2343. Although the DRA grants this default option, the Tribunal sees no reason to deviate from the general rule agreed upon by the Parties: there is financial logic in extending the rate of interest agreed upon for late payments to amounts awarded under the present Award. That the late payments rate should apply is reinforced by the fact that Reficar uses this rate as an alternative to its primary request.

2344. The interest rate for late payments under the EPC Contract may be found under TC 58.12, which under the Onshore Agreement provides for an annual rate of LIBOR +2% rate for amounts in USD and DTF +2% rate for amounts in COP²²⁸¹:

“58.12 Late Payment

[...] if either Party fails to pay any amount which is due and payable under this Agreement by the fourteenth (14th) Day following the date (if any) by which it is required to make such payment, such amount shall bear interest (as well as before any judgement) at:

58.12.1 in case of amounts in US Dollars, a rate per annum which is equal to LIBOR plus 2%; and

58.12.2 in case of amounts in Colombian Pesos, a rate which is equal to DTF plus 2% [...]” [Emphasis added].

[The Offshore Agreement reiterates the above provision²²⁸².]

2345. The above terms “LIBOR” for the USD and “DTF” for the COP rates are both defined under the EPC Contract

“‘LIBOR’ means the six-month US dollar London interbank offer rate as published by the British Bankers Association at approximately 11:00 a.m., London time, on the relevant Day”²²⁸³;

“‘DTF’ means the rate certified by the Central Bank of Colombia (“*Banco de la República*”) for the week in which late interest is accrued as per the provisions of this Agreement, to be the offered rate for 90 days Colombian Peso certificates of deposit”²²⁸⁴.

2346. TC 58.12 also specifies that the interest should be compounded daily²²⁸⁵:

“58.12 Late Payment

²²⁸⁰ JX-007, p. 13.

²²⁸¹ JX-002, p. 236; JX-004, p. 213.

²²⁸² JX-002, p. 236; JX-004, p. 213.

²²⁸³ JX-002, p. 167; JX-004, p. 153.

²²⁸⁴ JX-002, p. 164.

²²⁸⁵ JX-002, p. 236; JX-004, p. 213.

[...]

The applicable interest rate shall be payable on demand and shall accrue from Day to Day and shall be compounded daily from the date such amount should have been paid until the date of actual payment in full of such amount and such interest” [Emphasis added].

2347. Based on the above, the Tribunal decides that CB&I must pay Reficar interest on the amounts awarded and denominated in USD, at the rate of LIBOR for six-month deposits, plus a margin of 2%, compounded daily, with accrual starting as of December 31, 2015 and continuing until the date of actual payment of all outstanding amounts. For the reasons expressed in Section VIII.2.4 *supra* CB&I UK, CBI Colombiana and CB&I N.V. are jointly and severally liable as regards the payment of interest.

2348. Reficar, in turn, must pay CBI Colombiana interest on the amounts awarded in COB, at the rate of DTF, plus a margin of 2% compounded daily, with accrual starting as of December 31, 2015 and continuing until the date of actual payment of all outstanding amounts.

LIBOR alternative

2349. The Tribunal notes that LIBOR is in the process of phasing out and for this reason the Tribunal must make contingencies and establish an alternative to LIBOR, should it cease to exist while interest is still accruing.

2350. The Tribunal posed this question to the Parties, and they provided the following answers²²⁸⁶:

2351. Reficar proposes that the Tribunal should use the DTF; alternatively, Reficar would not be opposed if the Tribunal selected an alternative benchmark, which is widely accepted as a replacement for LIBOR²²⁸⁷.

2352. CB&I argues that the Tribunal should use the Secured Overnight Financing Rate [“SOFR”] as an alternative, as recommended by the Federal Reserve Board and the Federal Reserve Bank of New York²²⁸⁸.

2353. The Tribunal sides with CB&I.

2354. The rate of interest that accrues on any amounts is inherently connected with the underlying currency; for this reason, it would be unreasonable for the Tribunal to follow Reficar’s suggestion to apply the DTF rate, agreed by the Parties as the rate applicable to amounts awarded in COP, to amounts awarded in USD.

²²⁸⁶ Communication A 164.

²²⁸⁷ CPHB, para. 506.

²²⁸⁸ RPHB, para. 644, citing to:

https://www.newyorkfed.org/medialibrary/Microsites/arcc/files/2021/ARRC_Press_Release_Term_SOFR.pdf.

2355. CB&I, on the other hand, offers a reasonable proposal: the SOFR has been recommended by two major authorities in the State of New York, in which the seat of the arbitration is located.

2356. That SOFR should be accepted as the alternative to LIBOR is confirmed by Reficar, who has pleaded that it would not oppose a decision of the Tribunal adopting a widely accepted alternative benchmark instead of LIBOR; the Tribunal has already found that SOFR is a widely respected benchmark in the State of New York.

2357. For these reasons, should LIBOR cease to exist while interest is still accruing, SOFR should replace the LIBOR rate. Since the applicable LIBOR rate is the six-month rate, the SOFR replacement, if applicable, should also reflect the six-month rate of that benchmark.

3. CONCLUSION

2358. In sum, the Tribunal has decided that:

- (i.) CB&I must pay Reficar interest on the awarded amount of USD 937,495,061, at the rate of six-month LIBOR +2%, compounded daily, accruing from December 31, 2015 until the date of payment.
- Alternatively, should LIBOR cease to exist by the time of payment of the above amounts, then CB&I must pay Reficar interest on the awarded amount of USD 937,495,061, at the rate of six-month LIBOR +2%, compounded daily, accruing from December 31, 2015 until the date when LIBOR ceases to exist, and at the rate of six-month SOFR +2%, compounded daily, accruing from that date, until the date of payment.
- (ii.) Reficar must pay CBI Colombiana interest on the awarded amount of COP 28,256,049, at the rate of DTF +2% compounded daily, accruing from December 31, 2015 until the date of payment.

IX. COSTS

2359. In accordance with Art. 37(4) of the ICC Rules, the Arbitral Tribunal shall fix the costs of the arbitration and decide which of the Parties shall bear them or in what proportion they shall be borne by the Parties.

2360. At the invitation of the Tribunal²²⁸⁹, each Party presented its respective Statement of Costs²²⁹⁰.

2361. The following subsections account for the Parties requests (1. and 2.) and the Arbitral Tribunal's decision (3.).

2362. As the Tribunal will grant partial award on costs to both Parties, it will thereafter address the set-off of reciprocal credits adjudicated in the present Section (4.) and determine the applicable interest (5.).

1. CLAIMANT'S REQUEST

2363. Reficar requests the Tribunal an award of the costs of the arbitration incurred by Claimant, including attorneys' fees²²⁹¹.

2364. The Statement of Costs submitted by Claimant is as follows²²⁹²:

Submissions on Claim (all amounts are in \$USD)

Counsel fees	54,296,371
Expert/witnesses	28,489,929
Disbursements/expenses	16,469,424
Total	99,255,724

Submissions on Counterclaim

Counsel fees	11,953,694
Expert/witnesses	3,726,955
Disbursements/expenses	1,216,359
Total	16,897,008

Tribunal Decisions with Reservation on Allocation of Cost**Decision – Procedural Order No. 2**

Counsel fees	313,442
Disbursements	15,000
Total	328,442

Decision – Procedural Order No. 3

Counsel fees	271,182
Disbursements	-
Total	271,182

ICC Administrative Costs

Advance on cost of May 2016	147,000
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²²⁸⁹ Communication A 168.

²²⁹⁰ Communications C-232 and R-219. Claimant initially submitted its Statement of Costs on December 20, 2021 (communication C-232); in January 2022, the ICC Court increased the advance on costs for both Parties; as a result, Claimant resubmitted its Statement of Costs, together with a correction of a minor error, on February 21, 2022 (Communication C-233).

²²⁹¹ Reficar's request for relief no. 58 under CPHB, para. 532.

²²⁹² Communication C-233.

Advance on cost of September 2016	175,000
Advance on cost of August 2018	702,500
Advance on cost of November 2018	702,500
Advance on cost of May 2021	897,500
Advance on cost of January 2022	775,000
Total	3,399,500
Document Production Phase	
Incurred in preparation of DPS and in defense of its DPS	1,233,397
Incurred in preparation of objections to counterparty's DPS	646,853
Total	1,880,250
Grand Total	122,032,106

2365. Therefore, Reficar requests an award on costs of USD 122,032,106.

2. RESPONDENTS' REQUEST

2366. CB&I has asked for a declaration that it is entitled to be awarded its legal fees, expert fees, and costs of this arbitration²²⁹³.

2367. CB&I's Statement of Costs looks as follows:

Submission on Claim	
Legal Fees	67,847,277.19
Expert Fees	28,566,129.61
Disbursements/Expenses	6,235,709.10
Total	102,649,115.90
Submission on Counterclaim	
Legal Fees	21,969,859.90
Expert Fees	9,250,096.56
Disbursements/Expenses	2,019,206.39
Total	33,239,162.85
ICC Administrative Costs	
Payment of Initial Advance on Costs	325,000.00
Payment of Readjusted Advance on Costs	897,500.00
Payment of Further Readjusted Advance on Costs ²	775,000.00
Total	1,997,500.00
Submissions on Tribunal Decisions with Reservations on Allocation of Costs	
Procedural Order No. 2	
Legal Fees	283,365.12
Subtotal	283,365.12
Procedural Order No. 3	

²²⁹³ CB&I's request for relief no. hh. Under ESOD, para. 1612.

Legal Fees	569,390.43
Expert Fees	17,700.00
<i>Subtotal</i>	<i>587,090.43</i>
Total	870,455.55
Document Production Phase	
Costs incurred in relation to Respondents' DPS	246,902.15
Costs incurred in relation to Claimant's DPS	3,896,899.20
Total	4,143,801.35
GRAND TOTAL	142,900,035.65

2368. Therefore, CB&I requests a declaration that it is entitled to a total of USD 142,900,035.65 on legal fees, expert fees, and costs of this arbitration.

3. DISCUSSION

2369. In reaching its decision on the attribution of costs, the Tribunal will be guided by two provisions: the DRA (i.) and Art. 37 of the ICC Rules (ii.).

2370. (i.) Section 4.22 of DRA stipulates that²²⁹⁴:

“The Arbitral Tribunal shall be empowered to award all or a portion of the costs of the arbitration, and arbitration fees, to either Party. Any Party unsuccessfully resisting enforcement of any Arbitration Award must pay the enforcing Party’s cost of those proceedings”.

2371. (ii.) Art. 37.5 of the ICC Rules confirms the Tribunal’s discretion to make any decision it deems appropriate, at the same time suggesting that the Tribunal take into consideration the Parties’ conduct during the proceedings:

“5 In making decisions as to costs, the arbitral tribunal may take into account such circumstances as it considers relevant, including the extent to which each party has conducted the arbitration in an expeditious and cost-effective manner”.

2372. Additionally, Art. 37(1) of the ICC Rules establishes that there are two main categories of Costs:

- The reasonable legal costs incurred by each Party in the furtherance of the arbitration [**“Legal Costs”**] (3.1.); under the Statement on Costs, these are reflected by the attorney and expert fees, and the expenses; and
- The fees and expenses of the arbitrators and the ICC administrative expenses fixed by the Court [**“Administrative Costs”**] (3.2.).

2373. The Tribunal will take separate decisions regarding these two categories and it will summarize its findings (3.3.).

²²⁹⁴ JX-007, p. 13.

3.1. LEGAL COSTS

2374. The Tribunal will split its analysis into three categories: Claim (A.), Counterclaim (B.) and procedural decisions (C.).

A. Claim

2375. Reficar has been successful in its Claim and must, therefore, be reimbursed for the reasonable Legal Costs incurred in presenting its case.

2376. According to the Statement of Costs, Reficar spent USD 99,255,724 in Legal Costs relating to the Claim. The Tribunal finds that this amount is reasonable; this reasonableness is confirmed by the fact that CB&I spent a similar (slightly higher) amount in its defense against the Claim.

2377. The Tribunal must now decide what proportion of these reasonable costs should be borne by CB&I – the unsuccessful party. In reaching this decision, the Tribunal has considered that Reficar's case, in essence, dealt with the following issues:

- Pre-contractual liability claim, which, although not completely unmeritorious, the Tribunal finally decided against;
- Contractual liability claim, for breach of Cost and Schedule Control Commitments, which the Tribunal accepted, finding that CB&I had breached those contractual obligations with *culpa grave*;
- Quantum of the damages caused by said breach, which the Tribunal established at USD 1,008.41 million, which is approximately 25% of the amount claimed by Reficar.

2378. Allocating equal weight to each of the above issues and taking into account Claimant's relative success rate of 50% and 25% for the first and the last of them, and the full success of the second item, the Tribunal decides that, all in all, Reficar has been successful in, approximately, 58% ($50\% * 33.33\% + 100\% * 33.33\% + 25\% * 33.33\%$) of its claim.

2379. In light of the above, Reficar is entitled to the reimbursement of 58% of its reasonable Legal Costs arising out of the Claim, *i.e.*, USD 57,568,320.

B. Counterclaim

2380. CB&I filed a Counterclaim, in which it was partly successful, and must similarly be reimbursed for reasonable costs incurred.

2381. According to the Statement of Costs, CB&I spent USD 33,239,162.85 in Legal Costs. The Tribunal thinks that this amount should be adjusted downwards to reflect what, in its view, should be a reasonable amount. The Tribunal notes that Reficar has spent a significantly lower amount in its defense against the Counterclaim, USD 16,897,008. Taking this discrepancy into account, as well as the characteristics of the Counterclaim, the Tribunal finds that CB&I's Legal Costs should be brought down by, approximately, 33%. In the Tribunal's view, USD 22 million is an

acceptable quantification for CB&I's reasonable Legal Costs in bringing its Counterclaim.

2382. In determining what proportion of those reasonable costs should be disbursed by Reficar, the Tribunal has considered that the Counterclaim dealt with one major issue, which is the unpaid invoices (a.), and several other issues (b.).

a. Unpaid invoices

2383. CBI brought a Counterclaim of USD 48.6 million and COP 275 billion for unpaid invoices, but was ultimately only granted USD 914,939 and COP 28,256,049, which amount to, approximately, a 1% success rate.

2384. Taking into account the complexity and importance of this issue, the Tribunal decides to attribute 60% weight to it. The Tribunal will award 0.6% ($60\% * 1\%$) of CB&I's reasonable Legal Costs on account of the success of the unpaid invoices issue.

b. Other issues

2385. The Tribunal has also decided the following other issues:

- Improperly off-set amounts: this Counterclaim was dismissed by the Tribunal;
- Paid, but never approved invoices: this request had already been dealt with in the Tribunal's decision regarding the Claim;
- Drawing upon the Performance LoC: the Tribunal found that Reficar's drawing upon the Performance LoC had been correct, but acknowledged that said amount must be deducted from the amounts ordered to be paid to Reficar since Reficar had already collected; and
- Drawing upon the Advance Payment LoC: the Tribunal dismissed the declaratory relief requested by CB&I.

2386. The Tribunal decides to attribute a 50% success rate to CB&I for the decision on the unapproved invoices (these invoices were subject to the deduction of Excluded Costs) and the drawing of the Performance LoC (the amounts drawn down were deducted from the amounts ordered to be paid by CB&I) and 0% success rate to the other two issues.

2387. Taking into account the complexity and importance of each of these categories of Counterclaims, the Tribunal decides to assign a 10% weight to each of them.

2388. This brings CB&I's success rate on these four other issues to 10% ($[0\% * 10\%] + [50\% * 10\%] + [50\% * 10\%] + [0\% * 10\%]$).

* * *

2389. Summing up, considering the maximum reasonable defense costs incurred in arguing the Counterclaim of USD 22 million, the Tribunal finds that CB&I is entitled to a reimbursement of 10.6%²²⁹⁵ thereof, *i.e.*, USD 2,332,000.

C. Procedural Decisions

2390. Three procedural decisions warrant a decision in a distinct section²²⁹⁶:

- Document production (a.); and
- PO No. 2 and PO No. 3 (b.).

a. Document production

2391. The Tribunal notes that Claimant spent USD 1,880,250 in the document production exercise and Respondents USD 4,143,801. In view of the characteristics of the case, given the number of the document production requests, the Tribunal, exercising the discretion it has when deciding on costs, is of the opinion that USD 1 million is the maximum reasonable amount for Legal Costs incurred in the document production exercise.

2392. As anticipated in PO No. 1, the Tribunal will allocate that amount to the Party that showed more efficiency during the document production exercise, taking into consideration the reasonableness of the requests and objections, the willingness to produce documents and the relative success of the requests made²²⁹⁷.

2393. The Tribunal finds that Reficar has come closest to reaching efficiency, as it:

- Spent less than half the amount Respondents incurred and yet achieved a higher percentage of granted requests;
- Convinced the Tribunal that the counterparty's requests had to be rejected or narrowed down in a higher percentage than Respondents did; and
- Voluntarily produced a significantly higher number of requests than Respondents.

2394. For these reasons, the Tribunal decides that Claimant be awarded USD 1 million in Legal Costs incurred during the document production phase. The remainder of costs incurred by each Party shall not be reimbursed.

b. PO No. 2 and PO No. 3

2395. As explained in Section II.7 *supra*, PO No. 2 and PO No. 3 related to the admission of the Total Contested Documents from the *Contraloría* Proceedings. During this procedural incident, Reficar sent a letter to the *Contraloría* notifying it that Respondents had used documents obtained from the *Contraloría* Proceedings in this arbitration²²⁹⁸. At that stage of the proceedings, the Tribunal found that Reficar

²²⁹⁵ 0.6%+10%=10.6%

²²⁹⁶ PO No. 1, para. 65; Communication A 168.

²²⁹⁷ PO No. 1, para. 66.

²²⁹⁸ See para. 68 *supra*.

had breached the confidentiality regime of the arbitration by sending such notification²²⁹⁹ and reserved its decision on costs for this incident until the Final Award²³⁰⁰.

2396. The Tribunal considers that the reimbursement of reasonable Legal Costs incurred in defending this procedural incident is the appropriate remedy that should be granted to CB&I. According to the Statement on Costs, Respondents spent USD 283,365 in Legal Costs to address this incident; the Tribunal finds that this amount is reasonable, as Reficar spent a similar, if slightly higher, amount.

2397. Regarding PO No. 3, both Parties requested that the Tribunal order sanctions against the counterparty due to alleged improper procedural behaviour. As these specific allegations have not had any further development throughout the proceedings, the Tribunal does not consider that the Legal Costs arising out of PO No. 3 should be reimbursed to either Party.

2398. Thus, CB&I is entitled to USD 283,365 of its reasonable Legal Costs related to PO No. 2 and each Party should bear their own Legal Costs related to PO No. 3.

3.2. ADMINISTRATIVE COSTS

2399. As decided in the ICC Court's session of May 5, 2023, the Administrative Costs amount to USD 5,368,500²³⁰¹. Claimant paid USD 3,382,655²³⁰² and Respondents USD 1,985,845²³⁰³.

2400. The Tribunal finds that Reficar should be awarded a large portion of the Administrative Costs it paid: CB&I breached its Cost and Schedule Control Commitments with *culpa grave*, showing recklessness in the way it allowed costs and delay to grow. And, although the Tribunal ultimately decided that CB&I had not incurred pre-contractual liability, the Tribunal did acknowledge that CB&I's pre-contractual conduct was far from being commendable.

2401. Hence, the Tribunal finds that Reficar, undisputedly, had a lawful right to commence this arbitration and seek compensation for these breaches. The Tribunal also notes that Reficar's behaviour is not completely without reproach: it failed to pay approximately USD 1 million in invoices due and not all its claims for improper EPC costs have been successful.

2402. In view of this, the Tribunal decides that Reficar be compensated by CB&I for 80% of the Administrative Costs borne by Reficar, *i.e.*, USD 2,706,124. This means that the Administrative Costs are split in a proportion of, approximately, 12.6% for Reficar and 87.4% for CB&I.

3.3. CONCLUSION

²²⁹⁹ PO No. 2, paras. 152-154.

²³⁰⁰ PO No. 2, para. 154.

²³⁰¹ Case Financial Table compiled by the ICC, dated May 5, 2023.

²³⁰² USD 3,402,500 minus the reimbursed amount of USD 19,845.

²³⁰³ USD 1,997,500 minus the reimbursed amount of USD 11,655.

2403. In conclusion, Reficar is entitled to reimbursement of the following costs:

- Reasonable Legal Costs in a total of USD 58,568,320, comprising USD 57,568,320 incurred in relation to the Claim, as well as USD 1 million incurred with regard to the document production phase; and
- Administrative Costs in the amount of USD 2,706,124.

2404. Accordingly, Reficar is awarded costs in the amount of USD 61,274,444.

2405. On the other hand, CB&I is also entitled to an award on costs of USD 2,615,365 (*i.e.*, reasonable Legal Costs of USD 2,332,000 incurred in relation to the Counterclaim, and USD 283,365 in relation to PO 2).

4. SET-OFF

2406. The Tribunal has found that both Parties owe each other an award on costs. Thus, it will set-off the amounts due by applying the same principles as those decided in Section VIII.2 *supra* on set-off.

2407. Applying these principles, Reficar's award on costs, in an amount of USD 61,274,444, should be deemed partially paid and settled through set-off, against CB&I's award on costs in an amount of USD 2,615,365, as also adjudicated in this section.

2408. In light of the above, CB&I UK, CB&I N.V. and CBI Colombiana²³⁰⁴ must jointly and severally pay Reficar an award on costs in the amount of USD 58,659,079.

5. INTEREST

2409. As with set-off, interest on awarded costs will also fall under the same principles as those decided in Section VIII.3 *supra*, on interest. The only difference is that interest on awarded costs is to accrue from the date of the notification of this Award until the date on which payment of any amounts awarded has been carried out.

2410. Therefore, Respondents must pay Reficar interest on the costs awarded at the rate of six-month LIBOR (or the alternative rate, if LIBOR is discontinued²³⁰⁵) plus a margin of 2%, compounded daily, accruing from the date of the notification of this Award until the date of payment.

* * *

2411. In conclusion, the Tribunal decides that CB&I UK, CB&I N.V. and CBI Colombiana are ordered to pay jointly and severally to Reficar an award on costs of USD 58,659,079, plus interest at the rate of six-month LIBOR (or the alternative rate, if LIBOR is discontinued) plus a margin of 2%, compounded daily, accruing from the date of the notification of this Award until the date of payment.

²³⁰⁴ Respondents are jointly and severally ordered to pay the award on costs considering the Tribunal's decision in Section VIII.2.4 *supra*.

²³⁰⁵ See para. 2357 *supra*.

X. SUMMARY

2412. The Parties have presented long and exhaustive requests for relief in their submission, which are to be found in Section VI *supra*. In the next sub-sections, the Tribunal will provide a summary of the decisions adopted in this Award, by reference to the Blended Requests for Relief outlined in para. 299 *supra*. The Tribunal will devote individual sub-sections to

- Procedural decisions (1.),
- Precontractual liability (2.),
- Liability and quantum (3.),
- Joint and several liability, set-off and liquidation (4.),
- Interest and costs (5.), and
- Other claims (6.).

1. PROCEDURAL DECISIONS

2413. Reficar has asked the Tribunal to take three procedural decisions regarding the evidence of a witness who failed to appear at the Hearing, negative inferences from deficient document production and shifting of burden of proof²³⁰⁶. The Tribunal has taken the appropriate decisions in section III.2 *supra*.

2. PRECONTRACTUAL LIABILITY

2414. The Blended Request for Relief related to precontractual liability is the following²³⁰⁷:

“1. A declaration that CB&I committed pre-contract misconduct, breaching a pre-contractual duty to act in good faith and/or act with pre-contractual dolo and that CB&I is liable for damages”.

2415. The Tribunal’s findings with respect to precontractual liability are the following:

2416. Reficar’s case is that CB&I purposefully provided incorrect PFs (i.), July 2009 (ii.) and February 2010 (iii.) Estimates and April 2010 Schedule (iv.). The Tribunal, however, has found that²³⁰⁸:

- (i.) it was Reficar who had full knowledge of and requested the use of unrealistic PFs;

²³⁰⁶ CPHB requests for relief no. 1 and 2.

²³⁰⁷ CPHB requests for relief no. 3, 4, 5, 6, 7, 10, 23 and 24; RPHB, paras. 675.1 (Respondents’ ESOD requests for relief no. 3 and 29) and 675.3(e).

²³⁰⁸ See para. 653 *supra*.

- (ii.) the July 2009 Estimate did not adhere to the AACE Class 2 +/-10% accuracy level, but was not decisive for Reficar's decision to execute an RC contract;
- (iii.) the February 2010 Estimate did not meet the AACE Class 2 +/- 10% accuracy level, but Reficar was aware of this fact when it decided to execute an RC contract;
- (iv.) the April 2010 Schedule was not a Level 3 Schedule, but was acceptable to Reficar and, in any event, it was not decisive for Reficar's decision to execute an RC EPC Contract.

2417. As a matter of law, Reficar's case is that, by using deception and misrepresentation, CB&I induced Reficar to switch the EPC Contract from an LSTK to an RC methodology with liability caps. Reficar says that CB&I's misconduct resulted in *dolo* and in a breach of a pre-contractual duty to act in good faith.

2418. As regards the *dolo* claim, the Tribunal decided that²³⁰⁹:

- it was Reficar who, concerned about the volatile market conditions, took the initiative to change the EPC Contract from LSTK to RC;
- Reficar was aware that the February 2010 Estimate provided by CB&I was not an AACE Class 2 +/-10% estimate; similarly, it knew that the April 2010 Schedule was not a proper Level 3 resource-loaded schedule;
- Reficar did not rely on the Final Full Estimate when it consented to the RC EPC Contract, but on its own budget; similarly, it did not rely on the April 2010 Schedule, but accepted to agree to a Mechanical Completion Date and to receive the Level 3 resource-loaded schedule after the execution of the contract.

2419. The Tribunal also determined that Reficar took an informed decision to change to an RC EPC Contract, based on advice obtained from various expert sources; and that CB&I's input was not accepted lightly, but carefully reviewed by expert advisors engaged by Reficar.

2420. The Tribunal has further resolved that, even if it had found that CB&I's conduct amounted to *dolo (quod non)*, Reficar still would have failed to provide a counter-factual scenario to establish damages²³¹⁰.

2421. As regards the claim for breach of good faith duties, the Tribunal acknowledged that, although CB&I's behaviour was not commendable, it was not the expression of bad faith or indicative of a breach of the good faith duties under Art. 863 of the Colombian Commercial Code²³¹¹.

²³⁰⁹ See para. 739 *supra*.

²³¹⁰ See para. 747 *supra*.

²³¹¹ See para. 811 *supra*.

2422. In view of the above, the Tribunal's decision with regard to the Blended Request for Relief is that it:

"1. Declares that CB&I did not commit pre-contract misconduct, did not breach its pre-contractual duty to act in good faith and did not act with pre-contractual dolo and is not liable for any damages under this heading".

3. LIABILITY AND QUANTUM

2423. Both Parties have presented several claims based on the counterparty's breach of certain obligations. The Tribunal will first recall its previous decisions regarding CB&I's breaches (3.1.), then Reficar's breaches (3.2.). The Tribunal will then move to the question whether CB&I's breaches amounted to *dolo* or *culpa grave* and therefore, to the lifting of liability caps (3.3.). Finally, the Tribunal will address liabilities stemming from other proceedings (3.4.).

3.1. BREACH OF OBLIGATIONS BY CB&I

2424. The Tribunal has dismissed some claims based on the fact that they fall outside the Tribunal's power (A.). Claims adjudicated by the Tribunal power relate to the following contractual breaches: improper EPC Costs (B.), improper delay (C.), and work completion (D.).

A. Claims outside the Tribunal's power: indirect or consequential damages

2425. The Blended Request for Relief in this regard reads as follows²³¹²:

"2. A declaration that the limitations in Section 4.13 of the DRA are enforceable".

2426. The Tribunal has found that Section 4.13 of the DRA limits the Tribunal's authority to award indirect or consequential damages²³¹³; thus, Reficar's claims for

- lost profits (request for relief no. 22),
- cost of capital on lost profits (request for relief no. 51) and
- indirect PCS-related costs (requests for relief no. 44, 47 and 48),

which all seek indirect damages, are outside the Tribunal's power and consequently are dismissed²³¹⁴.

2427. Request for relief no. 47 (make-good obligation of defective Work) includes a combined claim for indirect damages and for direct damages, and the Tribunal has found that the claim for indirect damages is outside the Tribunal's power²³¹⁵.

²³¹² CPHB requests for relief no. 22, 44, 47, 48, 50 and 51: RPHB, para. 675.1 (Respondents' ESOD requests for relief no. 3 and 13).

²³¹³ See para. 2041 *supra*.

²³¹⁴ See para. 2076 *supra*.

²³¹⁵ See para. 2075 *supra*.

2428. In view of the above, the Tribunal's decision with regard to the Blended Request for Relief is that it:

"2. Declares that the limitations as regards the Tribunal's powers, contained in Section 4.13 of the DRA are enforceable; as a result, the Tribunal lacks the power to adjudicate Reficar's requests for relief no. 22, 44, 48 and 51 and these requests are dismissed; request for relief no. 47 is partially dismissed for the same reason".

B. Improper EPC Costs

2429. The Blended Request for Relief related to improper EPC Costs is the following²³¹⁶:

"3. A declaration that CB&I must reimburse Reficar USD 1,945.96 million for costs paid by Reficar to CB&I, in performing work that were not reasonably and properly incurred in accordance with the EPC Contract".

2430. The Tribunal has found that the EPC Contract is not a standard cost-reimbursable construction contract, because it includes specific, two-pronged Cost Control Commitments²³¹⁷:

- CB&I's Heightened Diligence Obligation, which required CB&I to rigorously control cost and schedule, in a similar way to a lump sum contract, and to safeguard Reficar's resources as if its own;
- CB&I's Reasonable Cost Obligation, under which CB&I agreed only to claim reimbursement for costs that had been incurred reasonably, properly and in accordance with the Contract.

2431. The Tribunal found that, pursuant to TC 4 and TC 58.9, Reficar is entitled to claw back any amounts paid to CB&I, whenever CB&I has breached its Cost Control Commitments²³¹⁸ and that in the present case CB&I has indeed committed such breach²³¹⁹.

2432. In order to determine the magnitude of the breach, *i.e.*, to quantify the costs incurred in the construction of the Project that were unreasonable or improperly incurred, the Tribunal opted for a Bottom-Up methodology, which compares the actual EPC costs with an appropriate baseline (defined as the Reasonable Cost Benchmark)²³²⁰. The methodology implies the following steps:

2433. (i.) The starting point of the calculation is the actual amount paid by Reficar to CB&I, which is USD 5,908.2 million.

²³¹⁶ CPHB requests for relief no. 8, 14, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 53 and 56; RPHB, paras. 675.1 (Respondents' ESOD requests for relief no. 1, 3, 6, 7, 9, 14, 15 and 27) and 675.3(b).

²³¹⁷ See para. 866 *supra*.

²³¹⁸ See para. 918 *supra*.

²³¹⁹ See para. 942 *supra*.

²³²⁰ See paras. 952 and 963 *supra*.

2434.(ii.) The second step of the calculation is the determination of the Reasonable Cost Benchmark, which the Tribunal set at USD 3,971 million.

2435.(iii.) Amounts paid in excess of the Reasonable Cost Benchmark constitute Excess Costs, which Reficar is in principle entitled to claw back; the Excess Costs are thus the difference between the total amount paid by Reficar (USD 5,908.2 million) minus the Reasonable Cost Benchmark (USD 3,971 million), *i.e.*, USD 1,937.2 million.

2436.(iv.) But the Tribunal also accepted that some of these Excess Costs were caused by factors outside CB&I's scope of control and needed to be excluded; these costs have been defined as Excluded Costs²³²¹.

2437.Excluded Costs amount to USD 1,091.20 million, broken down as follows:

- Costs caused by Unpredictable Events: USD 40.4 million²³²²;
- Costs due to scope changes: USD 247.5 million²³²³;
- Costs due to Claimant's Responsibility Events: USD 803.9 million²³²⁴.

2438.(v.) The Excluded Costs must be deducted from the Excess Costs, resulting in an amount of USD 845.4 million; this is the amount that Reficar is entitled to claw back from CB&I as improper EPC Costs²³²⁵.

2439.Reficar's additional claim for unsubstantiated advance payments, in an amount of USD 140 million, is already included in the previous analysis²³²⁶.

2440.In view of the above, the Tribunal's decision with regard to the Blended Request for Relief is that it:

"3. Declares that CB&I breached its Cost Control Commitments under the EPC Contract and must reimburse Reficar USD 845.4 million for costs paid by Reficar to CB&I, which had not been reasonably and properly incurred in accordance with the EPC Contract".

C. Improper delay

2441.The Blended Request for Relief related to improper delay is the following²³²⁷:

"4. A declaration that Reficar is owed USD 366.25 million for liquidated damages for delay".

2442.The Tribunal's findings with respect to improper delay are the following:

²³²¹ See para. 1015 *supra*.

²³²² See para. 1047 *supra*.

²³²³ See para. 1080 *supra*.

²³²⁴ See para. 1350 *supra*.

²³²⁵ See para. 1354 *supra*.

²³²⁶ See para. 1362 *supra*.

²³²⁷ CPHB requests for relief no. 43, 44, 50, 51, 52 and 55; RPHB, para. 675.1 (Respondents' ESOD requests for relief no. 1, 3 and 18).

2443. The Tribunal found that the Guaranteed Mechanical Completion Date agreed by the Parties was February 28, 2013²³²⁸ and that such date had not been amended²³²⁹. The Tribunal further determined that CB&I achieved Mechanical Completion of the Project when the final Certificate at Subsystem level was signed by Reficar, *i.e.*, on February 23, 2015²³³⁰. The delay of the Project was set at 725 days²³³¹:

- Of these 725 days of delay, 203 occurred before the Cut-Off Date and are attributable to Reficar²³³².
- Of the 522 days of delay which occurred after the Cut-Off Date, 334 days are CB&I's responsibility and 188 days are Reficar's²³³³.

2444. The prolongation costs in an amount of USD 157.1 million caused by these 188 days of delay attributable to Reficar have already been computed in the Excluded Costs and thus have been credited to CB&I²³³⁴.

2445. The 334 days of delay caused by CB&I give rise to the application of Delay Liquidated Damages, as provided under TC 54.8, in a total amount of USD 152.75 million²³³⁵.

2446. In view of the above, the Tribunal's decision with regard to the Blended Request for Relief is that it:

"4. Declares that CB&I breached its Schedule Control Commitments under the EPC Contract and owes Reficar USD 152.75 million for delay liquidated damages".

D. Work completion

2447. The Blended Request for Relief related to work completion costs is the following²³³⁶:

"5. A declaration that Reficar is owed USD 20,626,550 for specific impacts on PCS contractors, including the completion of outstanding and incomplete work and the correction of defective work".

2448. The Tribunal's findings with respect to work completion costs are the following:

2449. The Tribunal has decided that, once CB&I had achieved Mechanical Completion, Reficar took the Project over and CB&I was no longer under the obligation to complete any pending Works²³³⁷.

²³²⁸ See para. 1558 *supra*.

²³²⁹ See para. 1581 *supra*.

²³³⁰ See para. 1624 *supra*.

²³³¹ See para. 1718 *supra*.

²³³² See para. 1718 *supra*.

²³³³ See para. 1718 *supra*.

²³³⁴ See para. 1348 *supra*.

²³³⁵ See para. 1725 *supra*.

²³³⁶ CPHB requests no. 45, 46 and 47; RPHB, para. 675.1 (Respondents' ESOD requests for relief no. 1 and 3).

²³³⁷ See para. 1756 *supra*.

2450. The decision on correction of defective work, however, was different: CB&I was contractually obliged to correct defects and failed to properly comply with this commitment; thus, CB&I is obliged to pay to Reficar USD 10.3 million²³³⁸ as compensation for the cost of the PCS contractors which carried out the reparations *in lieu* of CB&I²³³⁹.

2451. In view of the above, the Tribunal's decision with regard to the Blended Request for Relief is that it:

"5. Declares that CB&I breached its defects correction obligations under the EPC Contract and owes Reficar USD 10.3 million for specific impacts on PCS contractors".

3.2. BREACH OF OBLIGATIONS BY REFICAR

2452. CB&I's counterclaim refers to Reficar's failure to pay invoices for cost incurred by CB&I (A.) and to Reficar's draw upon letters of credit (B.).

A. Unpaid invoices

2453. The Blended Request for Relief related to unpaid invoices is the following²³⁴⁰:

"6. A declaration that Reficar abused its rights and intentionally and/or maliciously breached its duties under the EPC Contract, and must reimburse CB&I for all reasonable and proper costs incurred until the EPC Contract is liquidated, in an amount of USD 146,964,022 and COP 568,695,037".

2454. The Tribunal's findings with respect to unpaid (and off-set) invoices is the following:

2455. The Tribunal has decided that CB&I was entitled to payment from Reficar for invoices that complied with the requirements of the EPC Contract: costs had to be reasonable and proper, and invoices had to be correctly submitted and verified²³⁴¹.

2456. The Tribunal applied this approach to all invoices claimed by CB&I and decided that Reficar owed CB&I USD 914,939 and COP 28,256,049 for reasonable, proper and duly verified, but unpaid invoices²³⁴²; the Tribunal also concluded that there was no proof that Reficar had breached the Contract intentionally, maliciously, in an abuse of right or bad faith²³⁴³.

2457. CB&I also claimed that the set-off performed by Reficar with regard to certain invoices had been improper and that the amounts set-off were still due, while Reficar denied the claim. The Tribunal dismissed CB&I's claim for lack of evidence²³⁴⁴.

²³³⁸ See para. 1834 *supra*.

²³³⁹ See para. 1831 *supra*.

²³⁴⁰ RPHB, paras. 675.1 (Respondents' ESOD requests for relief no. 1, 4, 8, 11, 26 and 31) and 675.1(a)

²³⁴¹ See para. 1373 *supra*.

²³⁴² See para. 1524 *supra*.

²³⁴³ See para. 1465 *supra*.

²³⁴⁴ See para. 1480 *supra*.

2458. In view of the above, the Tribunal's decision with regard to the Blended Request for Relief is that it:

"6. Declares that Reficar breached its payment obligations under the EPC Contract and owes CB&I USD 914,939 and COP 28,256,049 for reasonable and proper costs".

* * *

2459. Reficar presented two requests for defensive reliefs against CB&I's counterclaim²³⁴⁵; given that the Tribunal has partially accepted the counterclaim, these defensive reliefs are already addressed in the relief regarding the counterclaim.

B. Draw-down of letters of credit

2460. The Blended Request for Relief related to the draw-down of letters of credit is the following²³⁴⁶:

"7. A declaration that Reficar properly drew on the Performance LoC and that amounts already collected must be credited to CB&I in the settlement of accounts; a declaration that Reficar is entitled to fully draw on the Advance Payment LoC, and that amounts drawn reduce the total amount that CB&I is ordered to pay by this Award".

2461. The Tribunal's findings with respect to the draw-down on letters of credit is:

2462. Reficar's draw-down on the Performance LoC was proper: CB&I was in breach of its contractual obligations and the damage caused exceeded the amount of USD 70 million drawn down²³⁴⁷. Since the Performance LoC was drawn-down in full, CB&I no longer has any liability to Reficar under the Performance LoC²³⁴⁸.

2463. As regards the Advance Payment LoC, the Tribunal has decided that it covered the total USD 5,908.2 million of invoiced costs paid by Reficar²³⁴⁹. Reficar was fully entitled to draw upon the Advance Payment LoC when it first attempted to do so – there is, thus, no evidence of a fraudulent conduct²³⁵⁰ – and CB&I is still liable under the Advance Payment LoC²³⁵¹.

2464. If Reficar draws upon the Advance Payment LoC once this arbitration has finished, the amounts collected shall be deducted from CB&I's payment obligations as established in this Award²³⁵².

²³⁴⁵ CPHB requests for relief no. 13 and 15.

²³⁴⁶ CPHB requests for relief no. 16 and 17; RPHB, paras. 675.1 (Respondents' ESOD requests for relief no. 3, 4, 5, 20, 21, 22, 23, 24 and 25) and 675.3(d).

²³⁴⁷ See para. 1488 *supra*.

²³⁴⁸ See para. 1489 *supra*.

²³⁴⁹ See para. 1519 *supra*.

²³⁵⁰ See para. 1521 *supra*.

²³⁵¹ See para. 1519 *supra*.

²³⁵² See para. 1520 *supra*.

2465. In view of the above, the Tribunal's decision with regard to the Blended Requests for Relief is that it:

"7. Declares that Reficar properly drew on the Performance LoC and that amounts already collected must be credited to CB&I in the settlement of accounts; Reficar is entitled to fully draw on the Advance Payment LoC, and amounts drawn will reduce the total amount that CB&I is ordered to pay in this Award".

3.3. LIMITATIONS OF LIABILITY

2466. The Blended Request for Relief related to limitations of liability is the following²³⁵³:

"8. A declaration that CB&I breached the EPC Contract during the execution phase through culpa grave or gross negligence and CB&I cannot avail itself of the limitation-of-liability provisions in the EPC Contract".

2467. The Tribunal's findings with respect to the limitations of liability are the following:

2468. The Tribunal analysed CB&I breaches of the Cost and Schedule Control Commitments²³⁵⁴:

- The Cost and Schedule Control Commitments were all essential obligations;
- The breaches by CB&I were material and led to foreseeably significant damages;
- CB&I showed recklessness during the breach of its Cost and Schedule Commitments, taking no responsibility for the increases in costs and time and failing to take mitigating actions.

2469. As a result, the Tribunal found that CB&I acted with *culpa grave* when it breached the Cost and Schedule Control Commitments; thus, the liability caps under TCs 8 and 54 do not find application²³⁵⁵.

2470. In view of the above, the Tribunal's decision on the Blended Request for Relief is that it:

"8. Declares that CB&I breached the EPC Contract Cost and Schedule Control Commitments through culpa grave or gross negligence and that CB&I cannot avail itself of the limitation-of-liability provisions in the EPC Contract with regard to the amounts awarded to Reficar in decisions 3. and 4. supra".

3.4. INDEMNIFICATION COMMITMENTS

²³⁵³ CPHB requests for relief no. 9, 10 and 12; RPHB, para. 675.1 (Respondents' ESOD requests for relief no. 3, 12, 18 and 28).

²³⁵⁴ See Section VIII.1.2.4 *supra*.

²³⁵⁵ See para. 2232 *supra*.

2471. The Blended Request for Relief related to the Indemnification Commitments is the following²³⁵⁶:

“9. A declaration that each Party owes the other or its Group members defense and indemnity for any judgment or decision by Colombian courts or any other governmental authority”.

2472. The Tribunal’s findings with respect to the Indemnification Commitments are as follows:

2473. The Tribunal found that the breaching Party must comply with its Indemnification Commitments, to the extent that the breaches determined in this Award give rise to an Indemnifiable Event.

2474. In view of the above, the Tribunal’s decision with regard to the Blended Request for Relief is that it:

“9. Orders both Parties to comply with their respective Indemnification Commitments under the EPC Contract, to the extent that the breaches determined in this Award trigger an Indemnifiable Event”.

4. JOINT AND SEVERAL LIABILITY, SET-OFF AND LIQUIDATION

2475. The Tribunal will address each category of decisions separately.

2476. The Blended Requests for Relief related to the set-off, payment and liquidation of the EPC Contract are the following:

“10. A declaration that CB&I UK and CBI Colombiana are jointly and severally liable under any Project Agreement. A declaration that CB&I N.V. is jointly and severally liable as a primary obligor for all obligations declared and amounts awarded pursuant to the Parent Guarantee”²³⁵⁷;

“11. A payment order for the amounts awarded”²³⁵⁸;

“12. A declaration that the Tribunal has Liquidated the EPC Agreement and established the appropriate EPC Agreement value”²³⁵⁹.

4.1. JOINT AND SEVERAL LIABILITY

2477. The Tribunal has found that CB&I UK, CBI Colombiana and CB&I N.V. are all jointly and severally liable under the EPC Contract with regard to the totality of amounts awarded in the present procedure²³⁶⁰.

²³⁵⁶ CPHB, requests for relief no. 18 and 19; RPHB, paras. 675(1) (Respondents’ ESOD requests for relief no. 3, 16, 17, 32 and 33) and 675.3(c).

²³⁵⁷ CPHB requests for relief no. 20 and 21; RPHB, paras. 675(1) (Respondents’ ESOD request for relief no. 3) and 675.3(f).

²³⁵⁸ CPHB request for relief no. 60; RPHB, paras. 675(1) (Respondents’ ESOD request for relief no. 2).

²³⁵⁹ CPHB, requests for relief no. 15, 43, 46, 47, 56 and 60; RPHB, paras. 675.1 (Respondents’ ESOD requests for relief no. 2 and 26) and 675.3(g).

²³⁶⁰ See para. 2314 *supra*.

4.2. SET-OFF

2478. The Tribunal has established that CB&I owes Reficar USD 1,008.41 million, which comprises²³⁶¹:

- USD 845.4 million due to the breach of the Cost Control Commitments,
- USD 152.75 million due to the breach of the Schedule Control Commitments, and
- USD 10.3 million due to the breach of CB&I's obligation to provide the Works free of defects.

2479. Reficar, in turn, owes²³⁶²:

- To CB&I UK: USD 914,939 under the Offshore Contract, and
 - To CBI Colombiana: COP 28,256,049 under the Onshore Contract,
- for unpaid invoices.

2480. Both Parties have asked the Tribunal to perform a set-off of the amounts awarded and the Tribunal decided to do so as of the Liquidation Date, *i.e.*, December 31, 2015.

2481. Applying the set-off, Reficar's claim against CB&I UK in an amount of USD 1,008,410,000, are set-off against CB&I UK's counterclaim against Reficar in an amount of USD 914,939 resulting in a net credit held by Reficar against CB&I UK in an amount of USD 1,007,495,061. This amount must be reduced by USD 70 million already collected by Reficar under the Performance LoC²³⁶³. Thus, the amount in USD to which Reficar is entitled in accordance with this Award is USD 937,495,061²³⁶⁴.

2482. Reficar must, however, pay the amounts awarded under the Offshore Contract to CBI Colombiana for unpaid invoices, in an amount of COP 28,256,049.

4.3. LIQUIDATION

2483. The Tribunal has decided to liquidate the Contract as of the Liquidation Date and has established the value of the EPC Agreement at USD 5,074 million plus COP 28.3 million²³⁶⁵.

2484. In view of the above, the Tribunal's decision on the Blended Requests for Relief is that it:

"10. Declares that CB&I UK and CBI Colombiana are jointly and severally liable under any of the Project Agreements and that, pursuant to the Parent

²³⁶¹ See para. 2078 *supra*.

²³⁶² See para. 1524 *supra*.

²³⁶³ See para. 1528 *supra*.

²³⁶⁴ 1,007,495,061-70,000,000= 937,495,061.

²³⁶⁵ See para. 2324 *supra*.

Guarantee, CB&I N.V. is jointly and severally liable as a primary obligor for all obligations declared and amounts awarded; as a result, Reficar may seek the relief awarded in this arbitration from all three Respondents: CB&I UK, CBI Colombiana and CB&I N.V., all of which are jointly and severally liable under the EPC Contract”;

“11. Orders (i) CB&I UK, CBI Colombiana and CB&I N.V. to pay jointly and severally to Reficar USD 937,495,061 and (ii) Reficar to pay COP 28,256,049 to CBI Colombiana ”;

“12. Declares that the EPC Agreement, with a value of USD 5,074 million plus COP 28.3 million, is liquidated as of December 31, 2015”.

5. INTEREST AND COSTS

5.1. INTEREST

2485. The Blended Request for Relief related to interest is the following²³⁶⁶:

“13. An order for interest on the balance after liquidation and post-award interest until the date of payment of the award”.

2486. The Tribunal’s findings with respect to interest are the following:

2487. CB&I UK, CBI Colombiana and CB&I N.V., which are jointly and severally liable, must pay Reficar interest on the amounts awarded and denominated in USD, at the rate of LIBOR for six-month deposits, plus a margin of 2%, compounded daily, with accrual starting as of December 31, 2015 and continuing until the date of actual payment of all outstanding amounts.

2488. Reficar, in turn, must pay CBI Colombiana interest on the amounts awarded in COB, at the rate of DTF, plus a margin of 2%, compounded daily, with accrual starting as of December 31, 2015 and continuing until the date of actual payment of all outstanding amounts.

2489. Should LIBOR cease to exist while interest is still accruing, SOFR should replace the LIBOR rate. Since the applicable LIBOR rate is the six-month rate, the SOFR replacement, if applicable, should also reflect the six-month rate of that benchmark.

2490. In view of the above, the Tribunal’s decision on the Blended Request for Relief is that it:

“13. Orders (i) CB&I UK, CBI Colombiana and CB&I N.V. to pay jointly and severally to Reficar interest on the awarded amount of USD 937,495,061 at the rate of six-month LIBOR plus a margin of 2%, compounded daily, accruing from December 31, 2015 until the date of payment and (ii) Reficar to pay to CBI Colombiana interest on the awarded amount of COP

²³⁶⁶ CPHB requests for relief no. 49 and 59; RPHB, para. 675.1 (Respondents’ ESOD requests for relief no. 3 and 35).

28,256,049, at the rate of DTF plus a margin of 2%, compounded daily, accruing from December 31, 2015 until the date of payment”.

5.2. COSTS

2491. The Blended Request for Relief related to costs is²³⁶⁷:

“14. An award on costs”.

2492. The Tribunal’s findings with respect to costs are that both Parties were entitled to an award on costs:

- Reficar in the amount of USD 61,274,444; and
- CB&I in the amount of USD 2,615,365.

2493. Applying the same set-off principles as in Section VIII.2 *supra*, the Tribunal found that Reficar’s award on costs should be deemed partially paid and settled through set-off, against CB&I’s award on costs.

2494. Accordingly, Reficar is entitled to a reimbursement of its costs in the amount of USD 58,659,079.

2495. Finally, the Tribunal found that the award on costs should accrue interest in the same manner as any other awarder amounts, with the difference that interest on awarded costs is to accrue from the date of the notification of this Award until the date on which payment has been effectuated.

2496. In view of the above, the Tribunal’s decision on the Blended Request for Relief is that it:

“14. Orders CB&I UK, CB&I N.V. and CBI Colombiana to pay jointly and severally to Reficar an award on costs of USD 58,659,079, plus interest at the rate of six-month LIBOR plus a margin of 2%, compounded daily, accruing from the date of the notification of this Award until the date of payment”.

6. OTHER CLAIMS

2497. Both Parties have presented a number of additional requests for relief which the Tribunal needs not address, because of their subsidiary nature:

- Reficar’s claim for breach of fiduciary duties²³⁶⁸ and disgorgement of CB&I’s profits and fees²³⁶⁹ is only pleaded in the alternative, should the Tribunal dismiss the contractual breaches claim²³⁷⁰, which it has not;
- Similarly, CB&I’s counterclaim for unjust enrichment²³⁷¹ would only become relevant if the contractually available remedy did not provide adequate

²³⁶⁷ CPHB request for relief no. 58; RPHB, para. 675.1 (Respondents’ ESOD request for relief no. 34).

²³⁶⁸ CPHB request for relief no. 11.

²³⁶⁹ CPHB request for relief no. 54.

²³⁷⁰ See para. 228 *supra*.

²³⁷¹ Respondents’ ESOD request for relief no. 11.

compensation; but in this case, CB&I has successfully claimed payment of invoices due – there is, thus, no room for an additional claim for unjust enrichment²³⁷².

2498. The Tribunal also notes that CB&I presented two further requests for relief for additional compensation for fluctuations²³⁷³ or unfair impact on CB&I's economic balance²³⁷⁴, which are now moot given that the settlement of accounts does not render a result in CB&I's favour.

2499. Therefore, the Tribunal will now take a final decision which adjudicates all requests for relief which have not been dealt with in the preceding decisions²³⁷⁵; namely, it:

“15. Dismisses any other claim, counterclaim or relief sought”.

²³⁷² See para. 1368 *supra*.

²³⁷³ Respondents' ESOD requests for relief no. 36.

²³⁷⁴ Respondents' ESOD requests for relief no. 37.

²³⁷⁵ Among other, CPHB requests for relief no. 57 and 61 are covered by this decision. Similarly, Respondents' ESOD request for relief no. 30 is partially addressed in the Tribunal's adjudication of Reficar's Improper EPC Costs claim.

XI. DECISION

2500. For the reasons provided above, the Arbitral Tribunal decides as follows:

1. Declares that CB&I did not commit pre-contract misconduct, did not breach its pre-contractual duty to act in good faith and did not act with pre-contractual *dolo* and is not liable for any damages under this heading;
2. Declares that the limitations as regards the Tribunal's powers, contained in Section 4.13 of the DRA are enforceable; as a result, the Tribunal lacks the power to adjudicate Reficar's requests for relief no. 22, 44, 48 and 51 and these requests are dismissed; request for relief no. 47 is partially dismissed for the same reason;
3. Declares that CB&I breached its Cost Control Commitments under the EPC Contract and must reimburse Reficar USD 845.4 million for costs paid by Reficar to CB&I, which had not been reasonably and properly incurred in accordance with the EPC Contract;
4. Declares that CB&I breached its Schedule Control Commitments under the EPC Contract and owes Reficar USD 152.75 million for delay liquidated damages;
5. Declares that CB&I breached its defects correction obligations under the EPC Contract and owes Reficar USD 10.3 million for specific impacts on PCS contractors;
6. Declares that Reficar breached its payment obligations under the EPC Contract and owes CB&I USD 914,939 and COP 28,256,049 for reasonable and proper costs;
7. Declares that Reficar properly drew on the Performance LoC and that amounts already collected must be credited to CB&I in the settlement of accounts; Reficar is entitled to fully draw on the Advance Payment LoC, and amounts drawn will reduce the total amount that CB&I is ordered to pay in this Award;
8. Declares that CB&I breached the EPC Contract Cost and Schedule Control Commitments through *culpa grave* or gross negligence and that CB&I cannot avail itself of the limitation-of-liability provisions in the EPC Contract with regard to the amounts awarded to Reficar in decisions 3. and 4. *supra*;
9. Orders both Parties to comply with their respective Indemnification Commitments under the EPC Contract, to the extent that the breaches determined in this Award trigger an Indemnifiable Event;
10. Declares that CB&I UK and CBI Colombiana are jointly and severally liable under any of the Project Agreements and that, pursuant to the Parent Guarantee, CB&I N.V. is jointly and severally liable as a primary obligor for all obligations declared and amounts awarded; as a result, Reficar may seek the relief awarded in this arbitration from all three Respondents: CB&I UK,

CBI Colombiana and CB&I N.V., all of which are jointly and severally liable under the EPC Contract;

11. Orders (i) CB&I UK, CBI Colombiana and CB&I N.V. to pay jointly and severally to Reficar USD 937,495,061 and (ii) Reficar to pay COP 28,256,049 to CBI Colombiana;
12. Declares that the EPC Agreement, with a value of USD 5,074 million plus COP 28.3 million, is liquidated as of December 31, 2015;
13. Orders (i) CB&I UK, CBI Colombiana and CB&I N.V. to pay jointly and severally to Reficar interest on the awarded amount of USD 937,495,061 at the rate of six-month LIBOR plus a margin of 2%, compounded daily, accruing from December 31, 2015 until the date of payment and (ii) Reficar to pay to CBI Colombiana interest on the awarded amount of COP 28,256,049, at the rate of DTF plus a margin of 2%, compounded daily, accruing from December 31, 2015 until the date of payment;
14. Orders CB&I UK, CB&I N.V. and CBI Colombiana to pay jointly and severally to Reficar an award on costs of USD 58,659,079, plus interest at the rate of six-month LIBOR plus a margin of 2%, compounded daily, accruing from the date of the notification of this Award until the date of payment; and
15. Dismisses any other claim, counterclaim or relief sought by any Party.

Place of arbitration: New York City, New York, U.S.A.

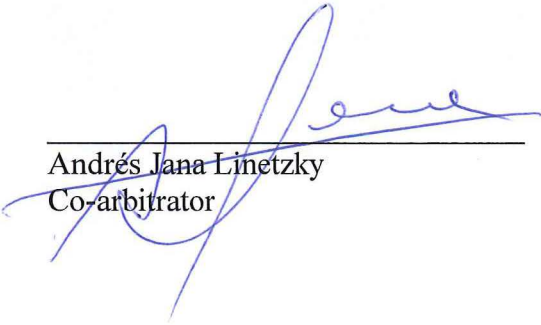
Date: June 2, 2023

THE ARBITRAL TRIBUNAL



Juan Fernández-Armesto
President of the Arbitral Tribunal

ICC Case 21747 RD/MK/PDP
Final Award



Andrés Jana Linetzky
Co-arbitrator

ICC Case 21747 RD/MK/PDP
Final Award

A handwritten signature in black ink, appearing to read "V. A. Ramsey", written over a horizontal line.

Sir Vivian A. Ramsey
Co-arbitrator